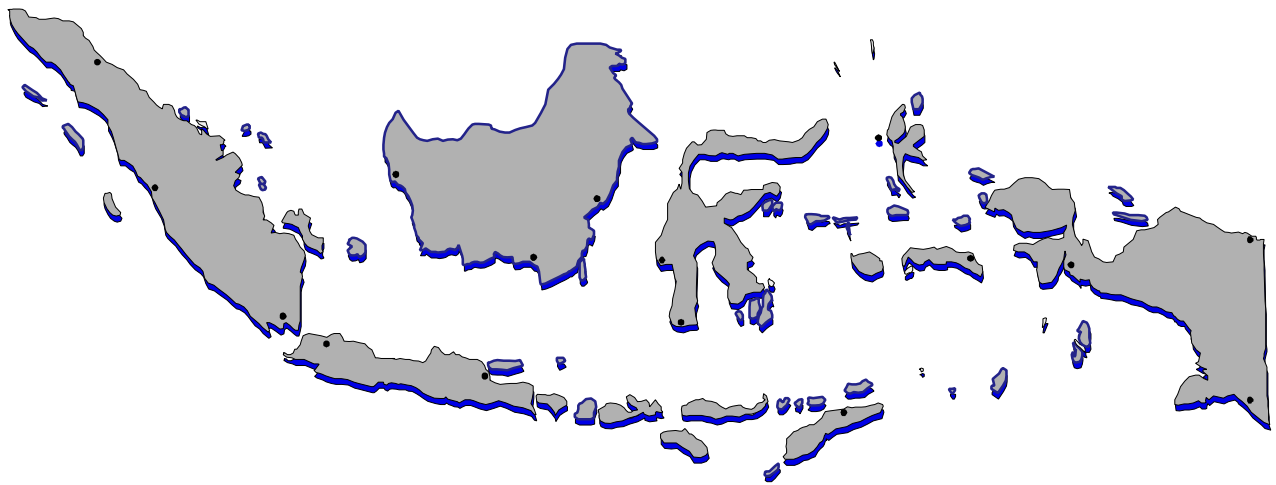


PETROLEUM REPORT

Indonesia: 2002 - 2003



March 2004
Embassy of the United States of America
Jakarta

Foreword

The Embassy would like to thank the Ministry of Energy and Mineral Resources, particularly the Directorate General of Oil and Gas (MIGAS), for supplying statistics, without which this report would not have been possible. The Embassy would also like to acknowledge the cooperation of Indonesia's production sharing contractors for current data and helpful suggestions to improve the accuracy of this report.

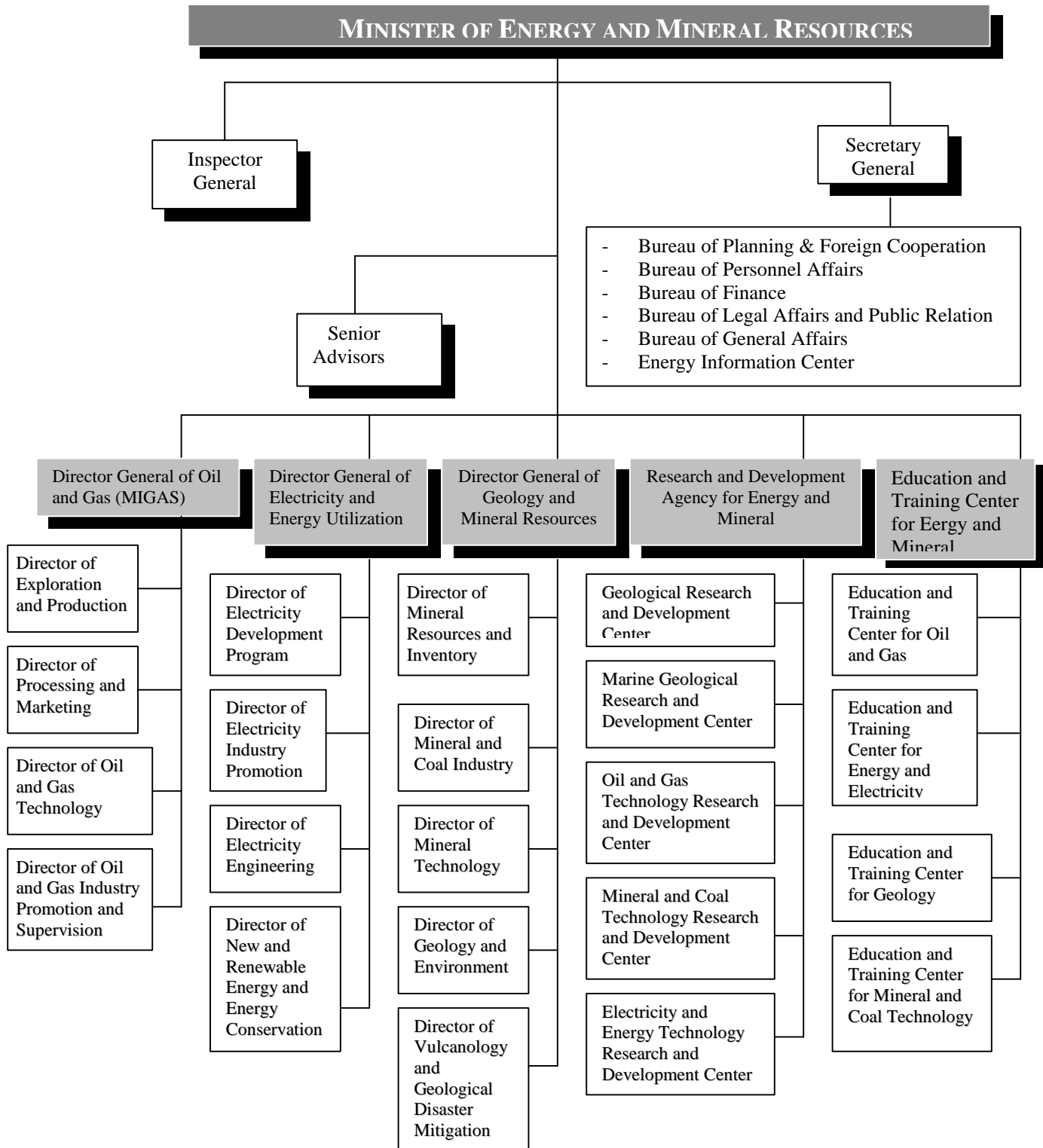
The intent of this report is to provide a summary of Indonesia's oil and gas sector in an effort to assist government policy makers and private sector companies better understand this important market. The regional financial crisis of 1997-98, from which Indonesia is only now recovering, highlights the importance of this sector to the Indonesian economy.

The report does not necessarily reflect the view of the U.S. Government. The Embassy has attempted to obtain the most accurate data from Indonesian Government sources. However, statistics drawn from different sources often display inconsistencies. This is the case between several tables in the appendices. To the extent possible, we have tried to indicate the source of the information. However, trends can be accurately depicted by observing data within a given table. This report uses an exchange rate of Rp 8,400 to one U.S. dollar, unless otherwise indicated. Finally, statistics are often revised at a later date. The Embassy plans to publish a mid-year supplement to this report, containing end of year oil and gas data for 2003.

This Petroleum Report is issued every other year. The Embassy will publish mid-year supplements to this report, containing final oil and gas data from the previous calendar year. The full report is also available on the U.S. Embassy website, www.usembassyjakarta.org.

APPENDIX 14: GOVERNMENT ORGANIZATIONS

APPENDIX 14.1: Organization Chart of the Ministry of Energy and Mineral Resources *)



APPENDIX 14.2: Selected Key Officials of the Ministry of Energy and Mineral Resources

Head Office: Jalan Merdeka Selatan 18, Jakarta
Tel: 380-4242 Fax: 381-0839

Minister: Dr. Ir. Purnomo Yusgiantoro

Tel: 381-3232 Fax: 384-6596

Dr. Ir. Luluk Sumiarso
Secretary General

Tel. 384-0686 Fax: 384-1896

Head, Sub Directorate for Oil and Gas
Exploration
Tel. 526-8910

Dr. Ir. Thamrin Sihite, ME
Head, Planning and Foreign Cooperation Bureau
Tel. 345-0814 Fax: 345-0846

Ir. Amirul Machmud Amin
Head, Sub Directorate for the Development of
Exploration and Exploitation
Tel. 526-8910 ext. 150

Sutisna Prawira SH. .
Head, Legal and Public Relation Bureau
Tel. 381-0848 Fax: 381-0848

Ir. Saryono Hadiwidjoyo, SE
Head, Sub Directorate for Oil and Gas
Production
Tel. 526-8910 ext. 119

Dra. Nenny Sri Utami P
Head, Energy Information Center
Tel. 381-0829 Fax: 381-0829

Vacant
Head, Sub Directorate for Natural Gas
Development
Tel. 526-8910

Ir. Iin Arifin Takyan
Director General, Oil and Natural Gas
(MIGAS)

Address: Plaza Centris, Jl. HR. Rasuna Said
Kav B/5, Kuningan, Jakarta
Tel: 526-9011, Fax: 526-9012

Ir. A. Edy Hermantoro
Head, Sub Directorate for Contract Area
Management
Tel. 526-8910

Waryono Karno SE, MBA
Secretary to Directorate General of Oil and Gas
Tel: 526-9027, Fax: 526-8979

Drs. Adi Subagyo Subono, MM
Head, Sub Directorate for Oil & Gas Marketing
Tel. 526-8910 ext. 150

Ir. Novian M. Thaib, MM
Director, Development of Oil & Gas
Undertakings
Tel: 526-9035, Fax: 526-9035

Vacant
Head, Sub Directorate for Processing
Tel. 526-8910 ext. 159

Ir. Indrayana C. SE, MSi
Director, Exploration and Production
Tel: 526-9045, Fax: 526-8904

Ir. Hasyim
Head, Sub Directorate for Non- Fuel Processing
Tel. 526-8910

Ir. Wayan Suryana
Director, Oil and Gas Mining Technology
Tel: 526-8983, Fax: 526-9037

Drs. Rossip E. Hutagalung
Head, Sub Directorate for Transportation
Tel. 526-8910

Ir. Herry Sudarmo
Director, Oil&Gas Processing and Marketing
Tel: 526-8982, Fax: 526-8981

Ir. Stefanus Suharto
Head, Sub Directorate for Environment and
Protection
Tel. 526-8910

Ir. R. Priyono

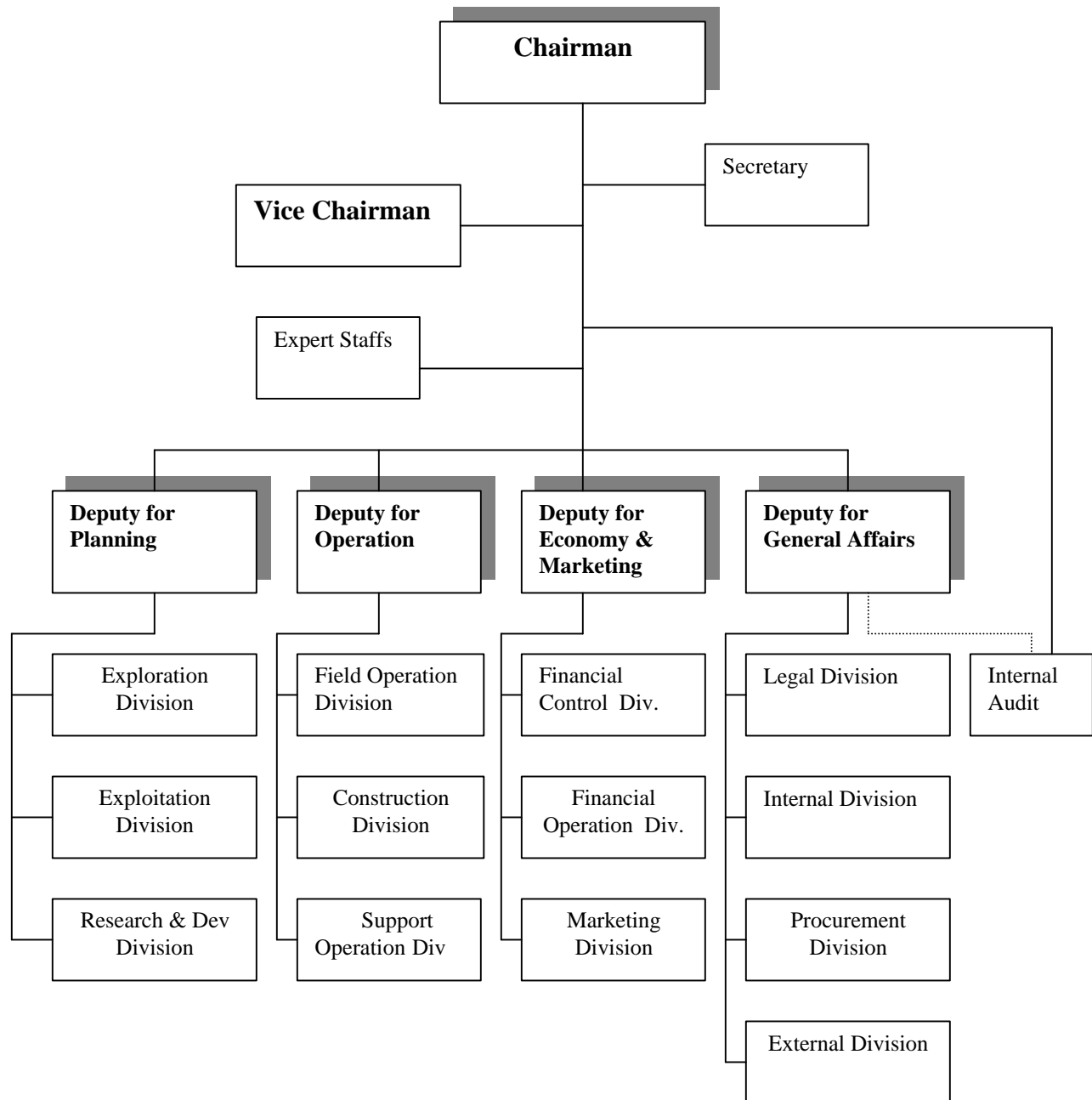
Ir. Albert Situmorang
Head, Sub Directorate for Oil and Gas Revenues
Tel. 526-8910

Mochammad Teguh P. SH
Head, Legal Affairs Division
Tel. 526-8910

Dr. Yogo Pratomo
Director General, Electricity and Energy
Utilization
Address: Jl. HR. Rasuna Said, Kuningan Kav 7
Jakarta
Tel: 525-6072 Fax: 520-3850

Dr. Simon F. Sembiring
Director General, Geology and Natural
Resources
Address: Jl. Dr. Supomo 10, Jakarta
Tel. 828-0773 Fax: 829-7642

APPENDIX 14.3: Organization Chart of BP MIGAS



APPENDIX 14.4: Oil and Gas Executive Board (BP Migas)

Office: Gedung Patra Jasa Lantai 1,2,13,14,16,21,22
Jl Gatot Subroto Kav 32-34, Jakarta
Tel: 529-00245 - 48

Dr. Ir. Rachmat Sudibyo

Chairman
Patra Jasa Building 22th Fl
Jl. Gatot Subroto Kav 32-34, Jakarta 12950
Tel. 5290-0000 Fax: 5290-0117

Dr. Kardaya Warnika

Vice Chairman
Tel. 5290-0090 Fax: 5290-0119

Ir. Zanial Ahmad
Deputy for Planing
Tel. 5290-0091 Fax: 5290-0009

Ir. R S Trijana Kartoatmodjo, MSc, Phd.
Deputy for Operation
Tel. 5290-0092 Fax: 5290-0011

Ir. Eddy Purwanto MBA
Deputy for Economy, Finance and Marketing
Tel. 5290-0248 Fax: 5290-0119

Bangun Usman Harahap
Deputy for General affairs
Tel. 5290-0013 Fax: 5290-1166

Ir. Achmad Lutfhi MBA
Head of Exploration Division
Tel. 5290-0002 Fax: 5290-0009

Ir. Dodi Hidayat
Head of Exploitation Division
Tel. 5290-0245 Ext 6441 Fax: 5290-0009

Abdul Muin
Head of Research and Development
Tel. 5290-0245 Fax: 5290-0009

Ir. Koeswo Wahyono
Head of Field Operation Division
Tel. 5290-0247 Fax: 5290-0119

I Gede Pradnyana
Head of Facility and Construction
Tel. 5290-0245 Fax: 5290-0119

Ir. Suhadi Sukarma
Head of Operational Supports
Tel. 5290-0246

Dra. Ingrid PL Tobing MM
Head of Financial Control Division
Tel. 5290-0878 Fax: 5290-0019

Mr. Sudjarjono
Head of Financial Operation Division
Tel. 5290-0245 Fax: 5290-0119

Ir. Joko Harsono
Head of Marketing Division
Tel. 5290-0245 Fax: 5290-0119

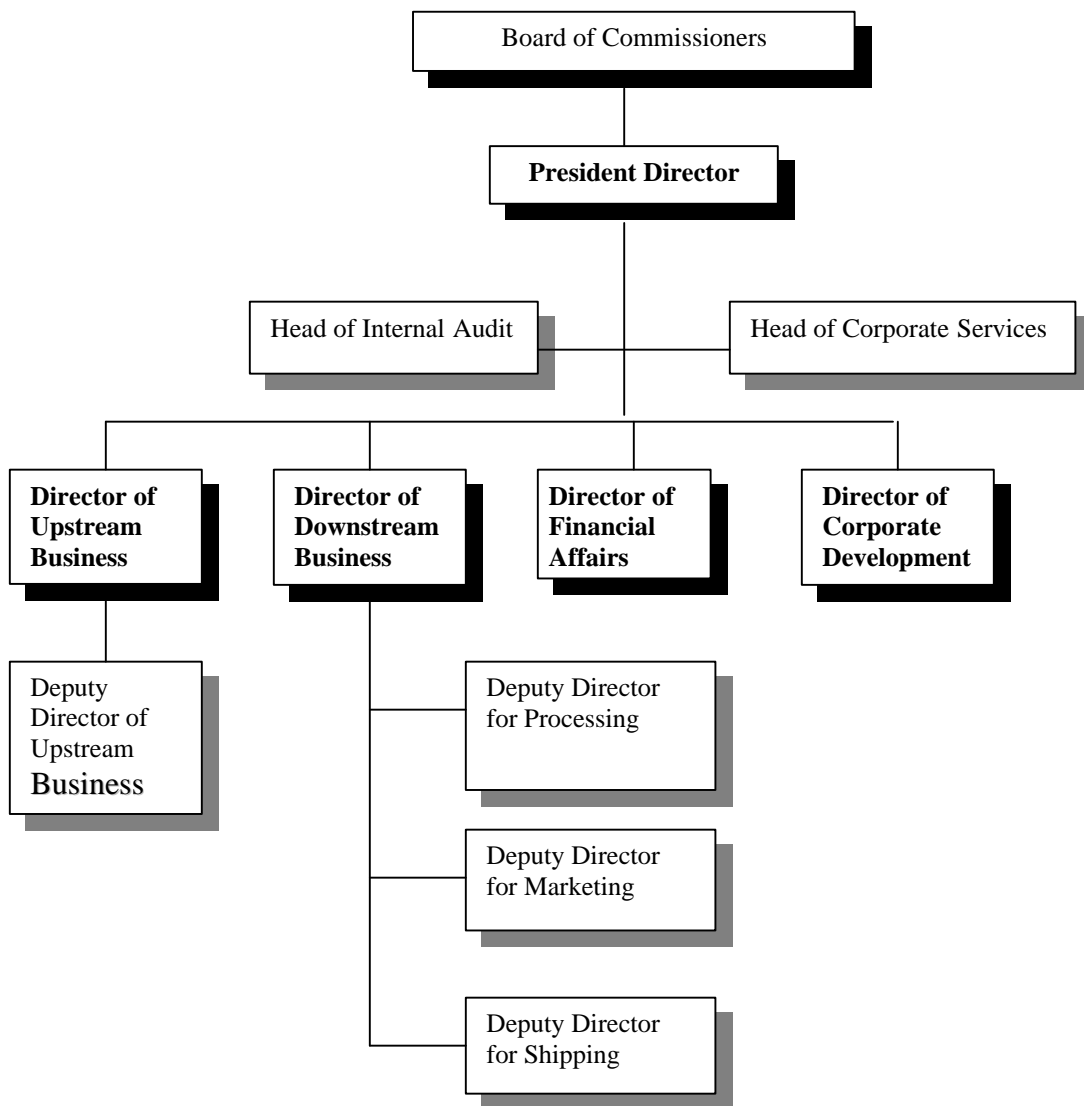
Allan Frederick SH
Head of Legal Affairs Division
Tel. 5290-0248 Fax: 5290-0119

Hardiono
Head of Internal Affairs Division
Tel. 5290-0246 Fax: 5290-0119

Bambang Kartika
Head of External Affairs Division
Tel. 5290-0892

Harijanto SH
Head of Public Relation
Tel. 5290-0245 Ext 6011
Fax: 5296-1369

APPENDIX 14.5: Pertamina Organization



*) Based on Presidential Decree No. 169, 2000

APPENDIX 14.6: Pertamina Board of Commissioners

Chairman

Ir. Laksamana Sukardi
State Minister for State Enterprises
Wisma Danamon, Aetna Life 26th Fl
Jl. Jendral Sudirman Kav 45-46, Jakarta
Tel. 577-2776 Ext. 1126, Fax: 577-0961

Members:

Ir. Roes Aryawijaya
Deputy for State Minister for State Enterprises
Wisma Danamon, Aetna Life 26th Fl
Jl. Jendral Sudirman Kav 45-46, Jakarta
Tel. 577-2776 Ext. 1126, Fax: 577-0961

Ir. Iin Arifin Takyan
Director General, Oil and Natural Gas (MIGAS)
Plaza Centris, Jl. HR. Rasuna Said Kav B/5, Kuningan, Jakarta

Tel: 526-9011, Fax: 526-9012

Syafruddin Tumenggung
Chairman of Indonesian Banking Restructuring Agency

Drs. Anshari Ritonga
Director General of State Budget
Jl. Lapangan Banteng Timur 4
Gedung Anggaran 2nd Fl, Jakarta
Tel. 384-2234 , Fax: 345-7490

Secretary

Ir. Maizar Rahman
Jl. Perwira 6, Jakarta 10710
Tel. 345-4020, 381-6654, Fax: 384-3854

APPENDIX 14.7: Selected key Pertamina Officials

Indonesia State Oil and Gas Company (PERTAMINA)

Head Office: Jalan Merdeka Timur 1A, Jakarta
Tel: 381-5111, 381-611, Fax: 384-3882, 384-68651

President Director: Ir. Ariffi Nawawi

Tel: 381-5000, 384-7246, Fax: 384-6859

Directorate of Upstream Business

Bambang Nugroho, Director
Office: Gedung Kwarnas Pramuka, 7th Fl
Jl. Merdeka Timur 6, Jakarta
Tel: 350-8048, 350-2150, Fax: 350-8032

Vacant
Deputy Director
Tel: 352-1548, Fax: 350-8037

Ir. Widodo Sutoyo
Senior Manager, Planning and Development
Tel: 352-1581, Fax: 350-8032

Ir. Subarkah Kustowo
Senior Manager, Oil and Gas Production

Tel: 352-1548, Fax: 350-8037

Ir. Okti Barmi
Senior Manager, Gas Development & Utilization
Tel: 352-1557, Fax: 350-8021

Ir. H. Wiradjat Aboekasan MM MBA
General Manager, Drilling Services
Tel. 352-1575, Fax: 350-8032

Ir. Irzawadi Agus
General Manager, Geothermal
Tel: 352-1576, Fax: 350-8033

Directorate of Downstream Business

Ir. Hary Purnomo , Director
(Office: Jl. Merdeka Timur 1A, Jakarta)
Tel: 384-7245, Fax: 381-1685

Ir. Asyhab
Deputy Director, Processing
Tel: 350-3961, Fax: 350-3960

Ir. Syahrir Hamzah
Senior Manager, Strategic Planning and
Business Development
Tel: 384-3713, Fax: 345-6985

Ir. Inoenoe Bt
Senior Coordinator, Downstream Refining
Projects
Gedung Patra Jasa, 15th Floor
Jl. Jend. Gatot Subroto Kav 23-24, Jakarta
Tel: 520-1626, Fax: 520-1678

Mrs. Tuty Anggrahini
Senior Manager, Fuel Marketing
Tel. 381-5060, Fax: 380-3632

Dwi Kushartoyo
Senior Manager, Fuel Oil Operation and
Economy
Tel. 381-5412

Ir. Wiharto
General Manager, LPG and Special Products
Tel: 381-5503, Fax: 384-6943

Ir. Poernomo
General Manager, Lub Oils
Tel: 381-5511, Fax: 384-4016

Ir. Wahyudi Suhartono
Downstream Project Coordinator on Marketing
and Business
Tel: 385-5286, 381-5501, Fax: 345-5344

Drs. Ibrahim Hasyim
Deputy Director, Shipping
Tel: 490-0311, Fax: 430-1562

P. Gultom Rouland
General Manager for Commercial and Charter
Tel: 381-8288, Fax: 350-2118

Directorate of Financial Affairs
(Office: Jl. Merdeka Timur 1A, Jakarta)

Alfred Rohimone, Director
Tel: 345-7585, 381-6000, Fax: 345-2958

Mr. Sutadi Pudjo Utomo
Senior Manager, Corporate Finance
Tel: 345-2755, 381-6004, Fax: 384-1516

Directorate of Corporate Development

Ir. Eteng A. Salam, Director
(Office: Jl. Merdeka Timur 1A, Jakarta)
Tel: 386-5209, Fax: 384-6861

Ir. Eddy Purwanto
Senior Manager for Corporate Planning
Tel: 345-4779, Fax: 345-4162

Ilham Joenoes
Senior Manager for Information Technology
Tel: 345-4283

Other Executive Staffs

Mr. Sartono
Head Internal Audit
Granadi Building, 8th Floor
Jl. H.R. Rasuna Said Kav. 8-9
Tel: 252-1781, Fax: 252-1553

Ir. Susanto
Senior Manager, Evaluation Center for Planning
and Budgeting
Pertamina Building, 18th Floor
Jl. Merdeka Timur 1A, Jakarta
Tel: 381-6807, Fax: 345-4862

Dr. Achmad Karno MPH
Head, Corporate Environmental & Safety
Center
Jl. HR Rasuna Said Blk X-7 Kav 8-9
Tel: 252-2745, Fax: 252-0564

Mr. Ramli Djaffar
General Manager of Public Relations
Jl. Merdeka Timur 1A
Tel: 381-5714, Fax: 345-4194

Ir. Said Djabbar
Expert Staff to President Director
Pertamina Bld. 18th Floor
Jl. Merdeka Timur IA, , Jakarta

Tel: 310-2633, 381-5143, Fax: 386-5065

Jl. Matraman Raya No. 59, Jakarta
Tel. 392-6007, Fax: 392-5983

Dr. Ir. F.X. Sujanto
Expert Staff to President Director
Gedung Kwarnas Pramuka, 7th Fl
Jl. Merdeka Timur 6, Jakarta
Tel: 352-1547, Fax: 350-8030

Dr. Ir. Didit Hadiatno
Executive Coordinator Natuna Gas Project

APPENDIX 14.8: Pertamina Overseas Representatives

Tokyo: Mr. Soekono Wahjoe
Imperial Tower 12th Floor
Uchisaiwai-cho-1-chome, Chiyoda-ku, Tokyo 1000 Japan
Tel: 03-3502 8221/5, Fax: 03-3502-5637

APPENDIX 14.9: Pertamina Affiliate Marketing Offices and Selected Joint Venture Companies

**KIPCO (Korea-Indonesia Petroleum
Company Ltd.)**
4th Floor, Building 221-5 Nonhyun-
Dong Kangnam-Ku, Seoul, Korea 135-010
Tel: (822) 518-1390-2 Fax: (822)518-3204

Jakarta Office
Wisma Nusantara, 25th Floor
Jl. M.H. Thamrin 59, Jakarta
Tel: 326-784, 331-608 Fax: 331-264

Pacific Petroleum and Trading Co. Ltd.
Yasuichi Arai, President Director
East Tower 11F, Akasaka Twin Tower
17-22 Akasaka 2 Chome Minatoku
Tokyo, Japan
Tel: (001813) 5562-6501
Fax: (001813) 5562-6504

Jakarta Representative Office
Agus Darmawan, Chief Rep
Skyline Building, 14th Floor
Jl. M. H. Thamrin 9, Jakarta
Tel: 314-3415, 315-0689, Fax: 314-0732

Perta Oil Marketing Ltd.
Suite 608 Dah Sing Financial Center

108 Gloucester Road
Wanchai, Hong Kong
Tel: (852) 2802-2108, 2824-9802

Jakarta Liaison Office
Sudirman Tower, 7th Floor
Jl. Jend. Sudirman Kav 60, Jakarta
Tel: 521-2850, Fax: 521-2858

Permindo
Wisma Bakrie Bld. 3rd Floor
Jl. H.R. Rasuna Said Kav B1, Jakarta
Tel: 525-0120, 525-0810, Fax: 525-3480

Arun NGL Co
Fachruddin, President Director
Wisma Nusantara 11st Fl
Jl. MH Thamrin No. 59, Jakarta
Tel. : (021) 314-3107 Fax : (021) 330-351

Badak NGL Co
Ir. Harry Purnomo, President Director
Wisma Nusantara 9th Fl
Jl. MH Thamrin No. 59, Jakarta
Tel. : (021) 330-243 Fax : (021) 314-974

Nusantara Gas Services Co.
Aldi Jenie, President
23Fl NBC Bldg

6-2-27 Nakanoshima kita-ku
Osaka 530 Japan

Appendix 14.11: Selected key PGN Officials

Indonesia State Gas Company (PGN):
Head Office: Jl. K. H. Zainul Arifin No. 20, Jakarta 11140
Tel : 633-4838, Fax: 633-3080

President Director
Drs. W M P Simandjuntak
Tel: 633-9524 Fax: 633-7784

Ir. Adil Abbas Reksoatmodjo
Director, Corporate Development
Tel: 633-9525 Fax: 633-1304

Ir. Herman Usman MBA
Head, Development Division
Tel. 633-4868 ext. 2200

Drs. Djoko Pramono MBA
Director, Financial Affairs
Tel: 633-4860 Fax: 633-1303

Ir. Hari Pratoyo MM
Head, Transmission and Distribution
Division
Tel. 633-4868 Ext 3200

Drs. Sutikno MSi
Director, General Affairs
Tel: 633-9526 Fax: 633-1109

Ir. Bambang Ismantono
Head, Marketing Division
Tel. 633-4868 Ext 3100

Ir. Nursubagio Prijono, MSc
Director, Business Affairs
Tel. 634-1203 Fax: 634-8616

Dra. Sri Budi Mayaningsih MM
Head, Budget Division
Tel. 633-4868 Ext. 4100

Ir. Uji Subroto Santoso MM
Head, Planning Division
Tel. 633-1302 Ext. 2110

APPENDIX 15: OIL CONTRACTS

APPENDIX 15.1 : Active Oil Contracts

No.	Signing Date	Operator and Share Holders (operator shown in bold)	Block and Location	Area (Current) (Km2)	Exploration Expenditure (US \$Mln)	Note Status
1	09-61 (07-89)	ConocoPhilips (50%) Mobil (50%)	Block A, On., Aceh	3,133 (1,803)	N/A	PSC Producing (Shut-in)
2	09-63 (07-89)	Exspan (100%)	On. Kampar, Central and South Sumatra	10,209 (9,192)	10.0	PSC Producing
3	09-63 (03-91)	Caltex (100%)	Siak,, On., Block, Central Sumatra	16,565 (8,314)	10.0	PSC Producing
4	01-67 (04-91)	BP (46%) CNOOC (36.7%) Inpex (7.3%) MC Oil (5%) C. Itoh (2.6%) Paladin (2.5%)	North West Java Sea, Off.	27,677 (20,735)	7.5	PSC Producing
5	09-67 (07-89)	ExxonMobil (100%)	B Block, North Sumatra	3,745 (1,496)	8.4	PSC Producing
6	03-67 (01-91)	TotalFinaElf (50%) Inpex (50%)	Mahakam,Off., East Kalimantan	16,330 (6,294)	3.8	PSC Producing
7	08-68 (04-90)	Vico (7.5%) BP (26.3%) Virginia Int (15.6%) Lasmo (26.2%) Opic Oil (20%) Universe (4.4%)	Sanga-Sanga, On., East Kalimantan	11,920 (5,782)	5.5	PSC Producing
8	10-68 (08-92)	ExxonMobil (100%)	NSO+NSO Ext. Off., North Sumatra	35,767 (15,695)	5.5	PSC Producing
9	10-68 (01-91)	Unocal (92.5%) Inpex (7.5%)	West Pasir, East Kalimantan	25,635	4.0	PSC Producing
10	10-68 (08-90) (01-99)	Conoco Philips (40%) Texaco (25%) Inpex (35%)	South Natuna Sea, Block B, South China Sea	103,286 (11,162)	14.0	PSC Producing
11	09-68 (02-92)	CNOOC (65.5%) Inpex Sumatra (13.08%) KNOC (8.9%) MC Oil (5%.) Paladin (7.52%)	Java Sea, Off. South East Sumatra	123,995 (11,046)	22.5	PSC Producing
12	10-68 (03-89)	Exspan (100%)	Tarakan, Samboja, East Kalimantan	136	N/A	TAC Producing

13	10-68 Amend. 83 (04-89)	ConocoPhilips (60%) Talisman (40%)	Corridor Block On., South Sumatra	1,154 (481)	N/A	TAC Producing
14	11-69 Ext 05-00	Kalrez Energy (100%)	Bula,Seram, On.	107,870 (7,620)	N/A	PSC Producing
15	11-69 Ext 05-00	Kufpec (92.5%) Kalrez Petroleum (2.5%) Canada Northwest Energy (5%)	Seram, non-Bula On.	N/A	N/A	PSC
16	08-70 (12-97)	Kondur Pet. SA (34.5%) OOGC Malacca (32.6%) PT. Imbang Tata Alam (26.03%) Malacca Petroleum Ltd (6.9%)	Malacca St., Kondur, On./Off.	39,550 (11,851)	11.0	PSC Producing
17	10-70 (06-95)	Energy Equity (100%)	Sengkang, On., South Sulawesi	5,697 (3,803)	7.5	PSC Producing
18	10-70 (10-96)	Petrochina (30%) Ludin Int (26%) Pertamina (10%) Pearl Oil (34%)	Kepala Burung, Irian Jaya, On.	5,158 (951)	5.35	PSC Producing
19	08-71 (8-01) (8-02)	Pertamina PT Bumi Siak Pusako Ex. Caltex	Coastal Plain/Riau	21,975 (9,857)	15.0	PSC Producing
20	04-73	PT. Exspan (100%) Ex. Stanvac	Barisan/Rimau South Sumatra	3,504 (1,538)	6.0	PSC Producing
21	01-75	Caltex (90%) Pertamina (10%)	Mountain Front, Kuantan	6,865 (3,000)	10.0	PSC Producing
22	03-75 (09-99)	Star Energy (31.25%) Premier (18.75%) SPC (15%) Novus U.K. (19.75%) Pertamina (10%) Novus Canada (5.25%)	Kakap Block, Off., Natuna, South China Sea	5,165 (2,000)	N/A	PSC Producing
23	10-79 (09-99)	Premier Oil (66.67%) Kufpec (33.33%)	Natuna Sea A (Anoa)	23,920 (5,000)	80.3	PSC Producing
24	01-80	ExxonMobil (76%) Pertamina (24%)	Natuna Sea D- Alpha, Off.	5,700 (4,165)	44.0	PSC Producing
25	11-80	BP (90%) Bimantara (10%)	Kangean, Off., Java Sea	18,035 (4,508)	44.0	PSC Producing
26	02-81	Indo Pacific Resources (100%) (Ex Kerr McGee)	Bawean, On./Off., East Java Sea	15,130	40.0	PSC Producing
27	02-81	ExxonMobil (100%)	Pase, On., Aceh North Sumatra	2,305 (920)	12.0	PSC Producing
28	05-81	Kodeco (25%) CNOOC (25%) Pertamina (50%)	Java Sea, Off., West Madura	6,460 (1,607)	63.4	JOA Producing

29	10-82	ExxonMobil (68.6%)-Ex Hudbay Husky (31.4%)	Madura Strait, Off., East Java	13,970 (2,795)	47.9	PSC - Evaluation for development
30	11-83 (10-92)	Caltex (100%)	Rokan, On., Riau, Central Sumatra	9,898	N/A	PSC ext Producing
31	12-83 (10-96)	ConocoPhillips (54%) Talisman (36%) Pertamina (10%)	Corridor, On., South Sumatra	11,151 (2,359)	N/A	PSC Producing
32	11-85	Costa Int. Group/Japex (50%) Pertamina (50%)	Gebang, On./Off., North Sumatra	4,905 (3,678)	35.0	JOA/JOB Producing
33	04-87	Exspan (60%) Petroleum Dev. (15%) Lundin BV (15%) Medco Lematang (10%)	Lematang, On., South Sumatra	1,137 (227)	120.0	PSC Producing
34	05-87	ConocoPhillips (80%) Santos (20%)	Warim, On., Irian Jaya	45,096 (15,250)	98.1	PSC – To be developed
35	12-87	BP (48%) MI Bearu (22.9%) Nippon Oil (17.1) KG Berau (12%)	Berau, On., Irian Jaya	22,650 (11,222)	50.0	PSC - To be developed
36	02-88	PetroChina (25%) Pertamina (50%) Enserch Far East (25%)	Tuban, On., East Java	7,391 (7,391)	35.0	JOA Producing
37	02-88	Talisman (50%) – CNE Pertamina (50%)	Ogan Komering, On., South Sumatra	4,630 (1,155)	40.0	JOA Producing
38	10-88	Total (25%) Inpex (25%) Pertamina (50%)	Tengah, On., East Kalimantan	1,534	11.0	JOA/JOB Producing
39	02-89	Pertamina (50%) YPF-Maxus (25%) Amerada Hess (25%)	Merang, On., Jambi	3,892 (2,914)	26.0	JOA/JOB
40	07-89	Golden Spike (50%) Pertamina (50%)	Pendoporaja, On., South Sumatra	2,134	37.0	JOA/JOB Producing
41	07-89	Sea Union Energy Pertamina	Limau	213	36.0	EOR Producing
42	11-89	Talisman	Tj. Raya, South Kalimantan	N/A	N/A	EOR Producing
43	01-90	ConocoPhillips (45%) PetroChina (30%) Pertamina (25%)	South Jambi, 'B' On., Jambi	3,850 (1,538)	12	JOA – Under development
44	01-90	Unocal (90%) Pertamina (10%)	Makassar Str., Off., Block A&B	5,880 (3,516)	49.2	PSC
45	04-90	ExxonMobil (100%)	Cepu, C. Java	1,670	28.0	TAC
46	04-90	PetroChina (17.02%) Pertamina (50%) Coparex Intl (12.9%) Moeco Salawati (6.9%) American EOI Inc (1.0%) Pearl Oil (11.11%)	Salawati, On./Off., Irian Jaya	4,400	23	JOA/JOB Producing

47	04-90	Lapindo (50%) Novus (50%)	Brantas, On./Off., East Java	14,950	56.0	PSC Producing
48	08-90	BP (80%) Kanematsu (20%)	Babo, On. ,Irian Jaya	15,875 (15,875)	70.0	PSC - To be developed
49	01-91	ConocoPhillips (100%)	Sakala, Off., West Lombok	10,319 (7,730)	101.5	PSC
50	03-91	Lirik Petroleum (100%)	Lirik On., South Sumatra	400	17.0	EOR Producing
51	03-91 03-97	Inpex (100%)	Attaka, East Kalimantan	145	30.0	PSC Producing
52	05-91	Santos (61.11%) ConocoPhillips (38.89%)	Bentu Segat,On., Riau	3,450 (1,043)	39.0	PSC - To be developed
53	05-91	BP (100%)	Muriah, Off., Java Sea	14,300	75.0	PSC
54	09-91	Petronusa (51%) Petro China (45%) Int. Mineral Resources (%)	Selat Panjang, On., Riau	3,785	19.0	PSC Producing
55	08-92	Suryaraya Teladan (100%)	Benakat Block, On., South Sumatra	47	35.5	EOR Producing
56	08-92	BG Int. (50%) BP (45%) Indonesia Nat. Gas Resources (5%)	Muturi. On., Irian Jaya	6,750	50.2	PSC
57	08-92	Pearl Resources (100%)	Tungkal Block,On., Jambi	9,155 (6,860)	32.4	PSC
58	02-93	BP (37.6%) CNNOC (42.4%) KG Petroleum Kanematsu (20%)	Wiriagar, Irian Jaya	304	15.0	PSC - evaluation for development
59	02-93	PetroChina (30%) Amerada Hess (30%) Kerr-McGee (30%) Pertamina (10%)	Jabung, On., Jambi	8,214	48.8	PSC Producing
60	02-93	Exspan (100%)	Pasemah, On., South Sumatra	8,560	20.5	PSC
61	02-93	PerminTracer Petroleum (100%)	N. Tanjung, On., South and Central Kalimantan	6,564	29.1	PSC
62	06-93	HED Indonesia Inc.	Abab, Raja, Dewa, South Sumatra	N/A	175	EOR Producing
63	12-93	Kodeco (50%) CNOOC (50%)	Poleng, Off., Java Sea	41	142.0	TAC Producing
64	12-93	Genindo C. Perkasa (35%) Energy Process Service Australia (65%) Equatorial Energy (80%)	Sembangkung, East Kalimantan	23	34.0	TAC Producing

65	07-94	Babat Kukui Energy (70%) GFB Resources (30%)	Babat/Kukui, South Kalimantan	9	17.7	TAC Producing
66	07-94	Binawahana Petrindo (100%)	Meruap, On., Jambi	246	12.3	TAC Producing
67	07-94	Patrindo Persada Maju (100%)	Wasian/Mogoi, Irian Jaya	198	91.9	TAC Producing
68	01-95	Radiant (60%) Gulf Stream Res. (40%)	Ramok/Senabing, South Sumatra	26	30.9	TAC Producing
69	01-95	Radiant (60%) Gulf Stream Res. (40%)	Sukatani, On., West Java	16	8.2	TAC
70	01-95	Intermega Sabaku	Salawati A, D, Sabaku, Irian Jaya	7	8.2	TAC Producing
71	01-95	Intermega Salawati	Salawati C,E, F, Irian Jaya	23	8.2	TAC Producing
72	02-95	PetroChina (50%) Coastal Indonesia (25%) SK Corp. (25%)	Bangko, On., Jambi	3,846	27.9	PSC
73	06-95	Putra Kencana	Basilam, North Sumatra	N/A	4.7	TAC Producing
74	06-95	KNOC Ltd (90%) Putra Bakti Mahkota (10%)	Sambidoyong, West Java	25	16.9	TAC
75	11-95	Pelangi Haurgelis Resources	Haurgeulis, West Java	N/A	9.8	TAC
76	11-95	Semberani Persada Oil	Semberah, East Kalimantan	N/A	83.2	TAC
77	05-96	Amerada Hess (66%) Premier Oil ConocoPhillips (22%) Dana Petro. (12%)	Pangkah, Off., East Java	3,500 (2,928)	27.1	PSC – Under development
78	10-96	Nexen Petroleum Indonesia (100%)	Seram, Off. Maluku	14,893	4.8	PSC
79	10-96	Pilona Petro Equatoprial Energy	Tj. Lontar, South Sumatra	N/A	28.9	TAC Producing
80	10-96	Lundin BV (40%) Amerada Hess (30%) CNOOC (16.7%) Paladin Resources (13.3%)	Blora, On., East Java	5,720	27.0	PSC
81	10-96	Garis Asta Tunggal (100%)	Bangkudulis, East Kalimantan	19	7.3	TAC
82	12-96	Indospec Asia Petroleum	Banga Dua, West Jawa	N/A	11.8	TAC
83	12-96	Gunakarsa Energy (10%) Matrix Oil (90%)	Galgah-Kambuna, North Sumatra	340	52.9	TAC
84	12-96	Ranya Energy	Pamanukan, West Java	49	5.2	TAC

85	12-96	Matrix Oil (75%) Risjad Salim (10%) EEX Asahan Ltd (15%)	Asahan, North Sumatra	4,200	73.7	PSC
86	12-96	Retco Prima Energy (65%) Pertamina (35%)	Tanjung Miring, South Sumatra	N/A	23.0	TAC
87	05-97	Medco (65%) Pertamina (35%)	North Madura, On., East Java	2,729	63.5	JOA
88	05-97	Santos (61.1%) ConocoPhillips (38.9%)	Korinci Baru, Riau	1,263 (1,069)	19.7	PSC
89	05-97	Putra Batu Mandi Petroleum (100%)	Batumiandi, North Sumatra	23	6.0	TAC
90	05-97	Titan Resources (85%) Binattek Reka Energy Natuna (10%) GFB Resources (5%)	Off., North East Natuna	2,944	39.5	PSC
91	05-97	PT Akar Gilindo (100%)	Tuba Obi Timur, Jambi	55	38.9	TAC
92	05-97	Total (50%) Inpex (50%)	Saliki, East Kalimantan	404	14.7	PSC - In the process of termination
93	05-97	PT. Insani Bina Perkasa	Sungai Gelam A,B,D, South Sumatra	52	12.8	TAC
94	05-97	Petronas (90%) Consolidated Energy (10%)	Tj. Jabung, Off., Jambi	8,350	129.7	PSC
95	05-97	GFB Resources (80%) Indama Putra Langsa (20%)	East Aceh Block Off., Langsa, North Sumatra	77	25.4	TAC
96	05-97	Matrix Oil/GFB Resources (80%) Indama Putra Langsa (20%)	East Aceh Block Off., Langsa, North Sumatra	77	25.4	TAC
97	09-97	Pearl Resources (100%)	Sebuku, Off., Makasar Str.	N/A	27.0	PSC
98	09-97	Sinopec Int (80%) PT. Telaga Binjai Energy (20%)	Binjai, On., North Sumatra	3,889	17.7	PSC
99	09-97	Greka Energy (75%) Pertamina (25%)	Jatiluhur, On., West Java	6,374	60.5	JOA/JOB
100	09-97	Unocal (80%) Lasmo (20%)	Sesulu Block, East Kalimantan	2,797	17.5	PSC
101	09-97	Energy Equity	Biru Field, South Sumatra	N/A	N/A	TAC
102	09-97	Energy Equity	Talang Babat, South Sumatra	N/A	N/A	TAC
103	12-97	KNOC (1000%)	Wokan, On./Off., Irian Jaya	13,237	30.0	PSC
104	12-97	Santos (75%) Talisman (25%)	Madura, Off.	4,246	59.7	PSC

105	12-97	Exspan (50%) Pertamina (50%)	Toili Block, Off., Central Sulawesi	475	22.0	PSC/JOB
106	12-97	Santos (45%) Coastal (40%) Cue Pty. Ltd. (15%)	Sampang, Off., East Java	2,677	39.6	PSC
107	12-97	Unocal (80%) Lasmo (20%)	Rapak Block, Off., East Java	2,937	27.5	PSC
108	12-97	Continental Wisdom (100%)	Bengara, On./Off., East Kalimantan	4,866	25.0	PSC
109	02-98	Unocal (80%) Lasmo (20%)	Ganal, Off., East Kalimantan	5,050	37	PSC
110	02-98	Lundin BV (100%)	Sareba , On./Off., Irian Jaya	4,290	27.7	PSC
111	02-98	Medco (62.5%) Pertamina (37.5%)	Simggaris, Off., East Kalimantan	2,728	64	PSC/JOB
112	02-98	Eni Ltd (55%) Unocal (45%)	Bukat, Off., East Kalimantan	6,250	48	PSC - Operator being changed
113	02-98	Golden Spike (60%) Pertamina (40%)	Pasiriaman, On., South Sumatra	2,280	24	PSC
114	06-98	Lasmo (60%) Pertamina (40%)	Malagot, Irian Jaya	4,235	67.4	PSC/JOB
115	06-98	Irian Jaya Gas (60%) Pertamina (40%)	Semirak, Irian Jaya	2,757	82	PSC/JOB
116	06-98	ConocoPhillips (50%) Petronas (50%)	Ketapang, Off., North Madura	4,433 (3,322)	43.9	PSC
117	06-98	CNOOC (45%) Coparex (45%)	Sokang Selatan, Off.,Riau	11,250	46.5	PSC
118	06-98	Rims Energy (50%) Petronas (50%)	Karapan, Off., East Java	4,000	49.9	PSC
119	11-98	BP (80%) Inpex (20%)	East Arguni, On./Off., Irian Jaya	4,865	69.0	PSC
120	11-98	BP (80%) Inpex (20%)	West Arguni, On./Off., Irian Jaya	3,495	84.0	PSC
121	11-98	Unocal (75%) Inpex (25%)	Sangkarang, Off., South Sulawesi	7,957	24.5	PSC
122	11-98	Unocal (100%)	Lompa, Off., Makassar Strait	10,268	24.5	PSC
123	11-98	Inpex (100%)	Masela, Off., Timor Sea	5,725	84.0	PSC
124	11-98	Exspan (60%) Ramu Int. (20%) Sri Gas Energy (20%)	Rombeai, On./Off., Irian Jaya	11,590	31.0	PSC
125	11-98	PT Putra Kencana Petroleum	Diski, North Sumatra	N/A	9.9	TAC
126	11-98	Intermega	Linda and Sele, Irian Jaya	12	7.3	TAC
127	09-99	Exspan (90%) Continental (10%)	Yapen, Off., Irian Jaya	N/A	18.0	PSC

128	09-99	Exspan (100%)	Bengara, Off., Irian Jaya	N/A	22.4	PSC
129	09-99	ENI (100%)	Krueng Mane, Off., North Sumatra	N/A	39.1	PSC
130	09-99	ENI (55%) Unocal (45%)	Ambalat, Off., East Kalimantan	N/A	16.5	PSC
131	11-99	Kalrez Pet (100%)	Seram , Bula On	35	N/A	PSC
132	11-99 (05-00)	Kufpec (97.5%) Kalrez Petroleum (2.5%)	Seram, Non Bula, Ons.			PSC
133	05-00	Energy Equity (100%)	Bone, Off., Sulawesi	4,451	N/A	PSC
134	05-00	Energy Equity	Gajah Besar, South Sumatra	39.42	N/A	TAC
135	05-00	PT. Idama Putra Kayapratama	Kaya, Sourth Sumatra	N/A	N/A	TAC
136	05-00	PT. Binatek Reka Kruh	Kruh, South Sumatra	N/A	N/A	TAC
137	05-00	Wahana Sad Karya First Union Resources	Jatirangon, West Java	N/A	N/A	TAC
138	05-01	Caltex (100%)	Kisaran, N. Sumatra	N/A	N/A	PSC
139	05-01	Lundin BV (50%) ConocoPhillips (50%)	Banyumas, C. Java	5,366	N/A	PSC – Under exploration
140	05-01	PT Buana Sadpetra Sebasa	Mamabang Sebasa, Musirawas	N/A	N/A	TAC
141	11-01	BP Bawean Ltd (55%) Santos Bawean (45%)	Bawean , off. Block, Java sea	N/A	N/A	PSC
142	11-01	Amerada Hess Petronas	Tanjung Aru, off.	N/A	N/A	PSC
143	11-01	ConocoPhillips (40%) Inpex (35%) Talisman (25%)	Nila block Off., Natuna Sea	5,271	N/A	PSC – Under exploration
144	11-01	Total Fina (38.5%) Inpex (38.5%) Unocal (23.0%)	Donggala, Makassar St. Off.	N/A	N/A	PSC
145	11-01	Zodan NV (51%) Agip (25%) Unocal (24%)	Popodi, Off. Makassar St.M	N/A	N/A	PSC
146	11-01	Zudavi NV (31%) Unocal (25%) Agip (24%)	Papalang, Off. Makassar St	N/A	N/A	PSC
147	11-01	ConocoPhillips (70%) Pertamina (30%)	Sakekemang On., South Sumatra	2,683	N/A	JOB
148	12-02	ENI Lasmo (50%) Unocal (50%)	Mura Bakau Offshore block, Makassar Straits	N/A	N/A	PSC
149	10-03	Exspan	Merangin I, on. C. Sumatra	3,247	N/A	PSC
150	10-03	PT Sele Raya	Merangin II, on. C. Sumatra	2,847	N/A	PSC

151	10-03	Orna Int.	Rembang, off. North C. Java	4,220	N/A	PSC
152	10-03	Sebana Ltd	Bulu, off. North C. Java	3,494	N/A	PSC
153	10-03	Provident Ind. Energy	Tarakan, off. E. Kalimantan	638	N/A	PSC
154	10-03	KNOC PetroVietnam Investment SK Corp.	North E. Madura I, off. E. Java	3,434	N/A	PSC
155	10-03	KNOC PetroVietnam Investment SK Corp.	North E. Madura II, off. E. Java	4,617	N/A	PSC
156	10-03	Eksindo Petroleum	South Madura, off. E. Java	1,586	N/A	PSC
157	10-03	Santos Ltd	N. Bali II, off.. E. Java	3,869	N/A	PSC

OTHER CONTRACTS

1	05-85	Mainline	Bunyu Island	10		SRC
2	10-92	Permindo Perlak	Perlak Field, North Sumatra	N/A	50.7	EOR
3	10-92	Tesada Arkindo	Telaga Said, North Sumatra	252	55.0	EOR
4	12-86	Japex	West and Central Java	7,800		Loan Agreement

EXTENDED CONTRACTS

1	07-89	Asamera (1961)	North Sumatra "A"	3,910	14	Producing
2	07-89	Stanvac (1963)	Kampar, South Sumatra	15,950	10	Producing
3	04-90	Arco (1967)	North West Java Sea	27,677	100	Producing
4	07-89	Mobil (1967)	"Bee", North Sumatra	3,745	46.4	Producing
5	04-90	Vico (1968)	Sanga-Sanga	12,617	55	Producing
6	04-89	Asamera (1968)	Tempino, South Sumatra	785	75.1	Producing
7	03-90	ConocoPhillips (1968)	Natuna Sea B	103,286	30	Producing
8	03-89	Tesoro (1968)	Tarakan, North East Kalimantan	359	20.5	Producing
9	01-91	Total/Inpex (1967)	Mahakam, East Kalimantan	16,870	63	Producing
10	01-91	Unocal (1968)	Balikpapan, East Kalimantan	6,825	57.1	Producing
11	03-91	Inpex (1968)	Attaka, East Kalimantan	145	30	Producing
12	03-91	Caltex (1963)	Rokan, Central Sumatra	8,314	21	Producing

13	02-92	Maxus (1968)	South East Sumatra, Java Sea	14,734	60	Producing
14	08-92	Mobil (1968)	Off., North Sumatra	14,942		Producing
15	10-92	Caltex (1971)	Rokan Block, Riau	N/A		Producing
16	06-95	Energy Egutity (1970)	Sengkang, On., South Sulawesi	5,697	21.5	Producing
17	10-96	Santa Fe (1970)	Klamono, Irian Jaya	5,158	10.2	Producing
18	10-96	Asamera (1983)	Block A, North Sumatra	11,151	65.0	Producing
19	12-97	Kondur Petrleum	Malaca Strait			Producing
20	09-99	ConocoPhillips	West Natuna – Block B PSC			
21	09-99	Star Energy	West Natuna – Kakap PSC	5,165 (2,000)	20.5	Producing
22	09-99	Premier Oil	West Natuna	23,920 (5,000)	80.3	PSC Producing
23	05-00	Kufpec (92.5%) Canada Northwest (5%) Kalrez Petroleum (2.5%)	Seram, Non Bula, Ons.			PSC
24	05-00	Kalrez Petroleum (100%)	Bula, Seram, On., Maluku			PSC Producing

Sources: MIGAS, BPMigas

APENDIX 15.2: Totally Relinquished Contracts

No.	Contract Signed	Last Operator	Block Name and Location	Area (Km2)	Expl. Commit.	Contract Relinq.
1	11-68	IFPC	S. China Sea “C”	N/A	N/A	71
2	11-68	Agip	S. China Sea “B”	105,000	14.0	06-72
3	03-68	Refican/Mobil	Aru Block, Sumatra	20,250	10.5	08-72
4	03-69	Dearbon	Maluku/Halmahera	47,500	N/A	12-70
5	03-69	Jenny	S.China Sea, Karimata	47,250	11.9	08-73
6	03-69	Jenny	Mentawai, Sumatra	69,250	11.9	08-74
7	01-71	Shell	S. Java Sea	9,500	18.0	09-74
8	09-67	Conoco/Union	Barito, Kalimantan	13,987	12.0	10-75
9	10-71	Conoco/Amoseas	Mimika, IrianJaya	53,000	17.5	12-75
10	02-70	Amoseas	Lombok Sea	55,250	9.8	01-76
11	02-70	Wendel/Phillips	NE Irian Jaya	32,000	17.5	02-76
12	07-68	Gulf	S. China Sea “D”	161,125	11.3	03-76
13	11-68	Total	Java Sea	170,000	0.6	03-76
14	03-72	Champlin	West Irian Jaya	74,075	13.2	03-76
15	08-68	Total	Jambi, C. Sumatra	21,175	10.5	07-76
16	10-68	Redco/Bow Valley	Subarijerigi	285	5.5	07-76
17	07-72	Total	Pamai Mantulik	31,085	3.0	07-76
18	01-67	Kyushu/Ashland	South Kalimantan	126,960	25.8	05-77

No.	Contract Signed	Last Operator	Block Name and Location	Area (Km2)	Expl. Commit.	Contract Relinq.
19	04-68	Intl. Oil	On./Off., Timor	25,805	2.5	05-77
20	05-68	Phillips	Irian Jaya, Arafura	320,320	17.0	04-78
21	12-69	Total	Jambi	14,000	10.0	04-78
22	03-70	BP	NE Kalimantan	29,000	8.5	04-78
23	01-68	Union Oil	West Sumatra	125,374	4.6	05-78
24	12-68	Agip	South China Sea "A"	102,729	21.0	12-78
25	10-66	Refican/Aquit.	SE Kalimantan, Off.	70,825	7.5	02-79
26	08-69	Asia Oil/Pexamin	Lampung & Banten	75,000	17.5	05-79
27	10-67	Austr. Drill. Co	Java Sea	154,700	7.5	10-79
28	12-69	Shell/Amoseas	East Kalimantan, On.	32,175	20.9	11-79
29	03-64	Refican/Aquit.	North Sumatra, Off.	16,220	N/A	05-80
30	10-70	Whitestone/Esso	Bomberai, Irian Jaya	15,450	10.2	10-80
31	03-67	Japex/Total	Bunyu, East Kalimantan	17,100	7.5	08-81
32	08-68	Huffco	Mangunjaya, South Sumatra	5,160	5.5	04-82
33	03-76	Houston Oil	East Java Sea	20,390	10.8	09-82
34	01-75	Phillips	East Kalimantan	3,094	17.1	10-82
35	01-80	Phillips	Waipona, Irian Jaya	15,250	17	01-83
36	11-80	Agip	N. Sakala, Java Sea	16,925	35.5	10-83
37	10-73	P.Trend/Marathon	Bintuni, Irian Jaya	16,360	9.9	01-84
38	08-81	Amoco	Barito C, East Kalimantan	7,220	77.0	01-84
39	02-80	Husky Oil	Banggai, East Sulawesi	17,795	15.0	02-84
40	11-80	Conoco	Karimun, Java Sea	17,000	120.0	04-84
41	10-68	Phillips	Teluk Berau, Irian Jaya	15,000	17.0	07-84
42	08-71	Arco	Sembangkung, NE. Kalimantan	16,000	19.8	07-84
43	01-74	Union Oil	Teweh, SE. Kalimantan	23,775	15.5	08-84
44	07-78	Japex	South Lampung	21,000	22.0	08-84
45	12-79	Mobil	Natuna Sea D II	5,040	71.2	12-84
46	06-80	Conoco	Mahato/Mandian	6,500	100.5	01-85
47	02-82	Union Texas	Cilacap, South Java	13,640	31.5	02-85
48	02-81	Union	Java Sea, NE Madura	13,002	59.0	03-85
49	02-81	Caltex	Singkarak, West Sumatra	7,265	90.6	03-85
50	10-79	Amoco	Panai, NE. Sumatra	8,209	13.0	11-85
51	10-82	Sceptre	Java Sea A	13,320	50.0	01-86

No.	Contract Signed	Last Operator	Block Name and Location	Area (Km2)	Expl. Commit.	Contract Relinq.
52	10-82	Sceptre	Java Sea B	17,740	47.0	03-86
53	04-86	Jasmine	East Madura	1,600	40.0	04-86
54	12-79	Shell	Memberamo, Irian Jaya	14,675	127.5	07-86
55	12-79	Mobil	Natuna Sea D I	5,240	67.2	07-86
56	02-82	Getty Oil	Pelabuhan Ratu	9,275	33.0	07-86
57	02-82	Mobil	Kutai, Semayang	18,460	142.0	10-86
58	12-79	Conoco	Nauka, Irian Jaya	42,755	12.0	06-87
59	05-81	CaltexChevron	Langsa, NE. Sumatra	7,080	175.1	06-87
60	06-82	Amoco	Lombok	26,640	68.0	07-87
61	04-84	Shell	Podena, Irian Jaya	9,430	110.0	08-87
62	04-84	BP	Merangin, South Sumatra	5,895	60.0	10-87
63	06-78	Jambi Oil	Jambi A	5,535	20.0	11-87
64	07-83	Elf Aquitaine	East Melawi, West Kalimantan	8,920	54.0	12-87
65	10-79	Total	Muturi, Irian Jaya	8,890	25.0	04-88
66	02-79	Marathon	Siri, East Java Sea	11,180	9.3	04-88
67	07-83	Total Quest/Inpex	West Melawi, West Kalimantan	13,295	48.5	04-88
68	10-82	Promet	Arafura Sea	18,315	55.0	05-05
69	05-80	Total	Natuna Sea DIII	5,125	15.0	02-89
70	01-80	Amoco	Kamura, Irian Jaya	22,305	18.0	03-89
71	06-78	Deminex/BP	Simenggaris	4,285	16.5	04-89
72	02-82	Elf-Aquitaine	Ritan, C.Kalimantan	18,260	50.2	07-89
73	02-82	Elf-Aquitaine	Maruwai, C.Kalimantan	19,535	60.5	07-89
74	08-81	Petroz N.L.	Asahan, North Sumatra	7,445	54.9	09-89
75	02-79	Shell	NE Jambi	19,030	14.0	11-89
76	05-80	Total	Sepasu, East Kalimantan	905	11.5	11-89
77	02-79	Caltex	Jambi Selatan B	5826	18.0	01-93
78	06-82	Mobil	Adang, East Kalimantan	10,140	40.0	01-90
79	10-78	P. Trend	Pamai Taluk A, C. Sumatra	18,684	15.5	03-90
80	03-73	Mobil	Makassar Strait A	20,914	9.0	06-90
81	11-86	Esso	Dumai, C. Sumatra	4,585	64.0	09-90
82	10-86	Total	M. Kampar, C. Sumatra	10,885	64.0	10-90
83	10-77	Conoco	KBSB A, Irian Jaya	9,200	40.6	92

No.	Contract Signed	Last Operator	Block Name and Location	Area (Km2)	Expl. Commit.	Contract Relinq.
84	06-79	Mobil	Peusangan, North Sumatra	3,440	12.0	92
85	12-85	Maxus	Aru, Irian Jaya	110,018	60.0	92
86	06-87	Shell B. V.	Asem-Asem	12,630	27.0	92
87	12-87	Brit Oil	Sula, East Sulawesi	14,986	35.0	92
88	12-87	Amoseas	Manui	12,032	33.5	92
89	02-88	Pertamina/Esso	Gundih, East Java	8,190	15.0	92
90	03-88	Pertamina/Esso	Musi Klingi	1,310	9.5	92
91	07-88	Pertamina/Shell	Madura Block	5,720	40.5	92
92	11-88	Pertamina/Teikoku	Sembangkung, East Kalimantan	11,005	34.0	92
93	07-87	Fina/Enterprise	Bengkulu	16,800	70.0	92
94	07-89	Pertamina/Repsol	Tangerang	10,500	58.2	92
95	07-89	Pertamina/Esso	Surulangun	2,870	14.0	92
96	12-87	Conoco	Buton, SE Sulawesi	18,903	67.9	93
97	02-89	Enterprise Oil	Panai	7,210	37.0	93
98	07-89	Pertamina/Total	Lahat, South Sumatra	2,720	64.5	93
99	11-89	Petrocorp	Bandar Jaya	11,500	50.4	93
100	04-90	Huffco	Kahayan, East Kalimantan	18,569	23.0	93
101	03-91	BP	Sailus, Flores Sea	10,268	56.4	93
102	11-88	Amoco	NE Java Sea V	11,773	105.1	94
103	02-89	Inpex	NE Java Sea VI	11,467	62.5	94
104	12-90	YPF/Maxus	Fifi/Zaitun, Java Sea	9,755	15.25	94
105	03-91	Shell	Masalembo, East Java	10,000	32.5	94
106	05-80	Union Texas	Tomori, East Kalimantan	5,700	14.5	06-95
107	08-81	Trident Petroleum	Barito B, South Kalimantan	7,725	59.0	06-95
108	08-85	Sceptre/BP/Esso	Bunyu, East Kalimantan	9,445	63.7	06-95
109	09-91	Amoseas/Caltex	Kalumpang, South Sulawesi	8,043	40	84
110	10-88	Mobil/BHP	E. Lengguru, Irian Jaya	9,296	55	83
111	01-90	Apache	Block IV, Off., East Java	8,815	40.5	12-95
112	03-91	BP	Satengar, Flores Sea	10,266	59.5	02-96
113	11-89	Amoseas	Misool, On./Off.	23,570	53.6	02-96
114	04-90	Amoseas	Soe Island, East Nusa Tenggara	18,481	54.0	03-96

No.	Contract Signed	Last Operator	Block Name and Location	Area (Km2)	Expl. Commit.	Contract Relinq.
115	09-91	Apache	Padang Panjang, On., West Sumatra	8,984	30.0	03-96
116	09-91	Talisman	Teso, On., Riau	10,360	15.7	07-96
117	11-82	Apex	Muara Enim, South Sumatra	290		10-96
118	12-90	GFB Resources	Kampar, South Sumatra	9,901	88.3	01-97
119	10-88	Mobil/BHP	West Lengguru, Irian Jaya	11,920	65.0	02-97
120	06-82	Inpex/Mobil	North Aceh, Off., North Sumatra	29,905	88.0	04-97
121	02-95	Union Texas	Barakan, Arafuru, Off., Maluku	400	12.9	09-97
122	05-91	Union Texas/Total	Tanimbar, On./Off., Maluku	23,800	27.4	10-97
123	06-93	Canadian Oxy Ltd/ PannCanadian Pet.	Sintang, On., West Kalimantan	20,000	26.0	10-97
124	05-91	Union Texas/Total	Rebi, Off., Maluku	22,260	28.2	10-97
125	11-89	Maersk Oil (85%) Canadian Pet. (10%) East Asia Gas and Oil Exploration (2%) Trans Asia Pet (3%)	Maratua, On./Off., East Kalimantan	13,435 (9,990)	70.5	1999
126	02-95	Arco (54%) BP Exp.(36%) Citraduta Samudra (10%)	Sepanjang, Off., East Java	6,670	23.5	1999
127	02-95	Talisman (100%)	Cenako, On., Riau	650	2.8	1998
128	06-95	Caltex Chevron (100%)	Lariang, On., South Sulawesi	4,086	25.0	1998
129	09-91	Arco (50%) Kanematsu (50%)	Kalosi, On., Sulawesi	11,038 (6,618)	32.5	1998
130	05-96	OPIC Corp.(32.5%) Treasure Bay Enterprise (35%) Mobil (32.5%)	Peudada, Off., Aceh	5,252	70.0	1999
131	05-91	Union Texas (100%)	Kai, On./Off., Maluku	24,570 (18,421)	41.8	1999
132	04-90	Gulf Resources (33.33%) Total (25%) Inpex (25%) Canadian Oxy (16.67%)	W. Natuna, Off., Riau	6,689 (4,456)	46.0	2000
133	03-91	Chevron (50%) Texaco (50%)	Nias, On./Off., North Sumatra	16,116	39.5	2000
134	02-92	Risjad Salim (100%)	Bontang, On./Off., East Kalimantan	2,070	36.3	2000
135	02-85	Unocal (60%) Inpex (25%) Katy Pet. (15%)	Teweh, On., Central Kalimantan	10,495 (3,265)	43.0	2000

No.	Contract Signed	Last Operator	Block Name and Location	Area (Km2)	Expl. Commit.	Contract Relinq.
136	07-94	Maersk Oil (97%) Trans Asia Petr. (3%)	Karang Besar, Off., East Kalimantan	980	35.0	2000
137	11-95	British Gas E&P (95%) Sapta Petra Wisesa (5%)	Malimping, Off., West Java	3,354	34.8	2000
138	05-97	Japex (60%) Elf Exploration (20%) Inpex (10%) Total (10%)	Sabo Block, Off., South Timor	4,571	157.9	2000
139	05-97	Indonesia Petroleum Ltd. (INPEX 100%)	Rabe Block, East Timor	6,500	96	2000
140	12-93	Gulf Resources (100%)	Merangin, South Sumatra	4,000	41.9	2000
141	10-96	Caltex Chevron (50%) Texaco (50%)	Sibolga, North Sumatra	9,821	22.8	2000
142	05-97	Total (50%) Inpex (50%)	Sebawang II, Off., East Kalimantan	4,982	35.3	2001
143	11-95	Gulf Resources (70%) Dana Petrol. (30%)	Halmahera, Off., Maluku	3,150	27.5	2001
144	02-98	South Makasar Petroleum Eploration Unocal	Kapoposang, Off., Makasar Strait	10,280	31	2001
145	12-90	Lasmo (35.63%) OPIC, Taiwan (20%) UGO (4.37%) Ross Petro. (10%) Japex (30%)	Runtu, On., East Kalimantan	12,880	60.9	2001
146	01-82	Exspan (100%) Ex Tesoro	Tarakan, On., North East Kalimantan	61,361 (44,503)	8.0	2001
147	12-97	PT.Pancacitra Multi Jaya PT. Energitama Abdi Nusa	Ibul Tenggara, South Sumatra	N/A	N/A	2001
148	12-96	Amerada Hess (100%)	Pagatan, South Kalimantan	8,595	25.8	2001
149	11-98	PT Insani EBM Nusa Energi	Selo, South Sumatra	N/A	17.1	2001
150	10-79	Caltex Chevron (55.6%) Marathon (22.2 %) Amerada (22.2%)	Natuna Sea B, Off.	24,605 (12,281)	62.0	2002
151	10-79	Caltex Chevron (50%) Texaco (50%)	Natuna Sea Block C, Off.	29,415 (17,649)	18.5	2002
152	05-91	Exspan (100%)	Cumi-Cumi, Off., Natuna Sea	4,970	34.0	2002
153	09-91	Marathon (100%)	Tiram, Off., West Natuna	1,494	17.2	2002
154	02-92	ConocoPhilips (65%) Kodeco (35%)	Block II, Off., Natuna Sea	5,675	47.0	2002

No.	Contract Signed	Last Operator	Block Name and Location	Area (Km2)	Expl. Commit.	Contract Relinq.
155	06-95	Gulf Resources (60%)	Calik, On., South Sumatra	542	7.2	2002
156	09-97	Premier Oil (50%) Dana Petro. (20%) Gulf Resources (30%)	North West Natuna Block I, Off.	5,765	27.0	2002
157	09-97	Nexen Petroleum (100%)	Mana, On., Bengkulu	11,115	29.8	2002
158	09-97	Total (100%)	North Sokang Block, Off., Natuna	10,260	64.8	2002
159	06-98	Total (100%)	Walio, Off. Irian Jaya	6,865	29.2	2002
160	01-91	ConocoPhillips (100%)	Sakala, Off., West Lombok	10,319 (7,730)	101.5	2003
161	11-98	ConocoPhillips (65%) Inpex (35%)	Tabong, Natuna Sea	4,400	24.7	2003

APPENDIX 15.3: New Working Areas Offered in 2002 and 2003

No	Block	Location	Status
2002 2nd round			
1	Muara Bakau	Makassar Strait	Sold
2	Taritip	Makassar Strait	Unsold – Open for direct award
3	Jangeru	Makassar Strait	Unsold – Open for direct award
4	Amborip-I	Arafura Sea	Unsold – Open for direct award
5	Amborip-II	Arafura Sea	Unsold – Open for direct award
6	Amborip-III	Arafura Sea	Unsold – Open for direct award
7	Amborip-IV	Arafura Sea	Unsold – Open for direct award
8	Amborip-V	Arafura Sea	Unsold – Open for direct award
9	Amborip-VI	Arafura Sea	Unsold – Open for direct award
10	Biga	Seram Sea	Unsold – Open for direct award
11	Segaf	Seram Sea	Unsold – Open for direct award
12	Polewali	South Sulawesi	Unsold – Open for direct award
13	Enrekang	South Sulawesi	Unsold – Open for direct award
14	Tigau	East Kalimantan	Unsold – Open for direct award
15	Mentana	East Kalimantan	Unsold – Open for direct award
16	Bengkanal	Central Kalimantan	Unsold – Open for direct award
17	Anambas	Natuna Sea	Unsold – Open for direct award
2003			
1	Merangin I	On. Central Sumatra	Sold to Medco
2	Merangin II	On. Central Sumatra	Sold to PT. Sele Raya
3	Rembang	On. North Central Java	Unsold
4	Bulu	On. North Central Java	Sold to Petroland Energy
5	South Madura	Off. East Java	Sold to Eksindo Petroleum
6	North East Madura I	Off. East Java	Sold to Kodeco/Petrovietnam
7	North East Madura II	Off. East Java	Sold to Kodeco/Petrovietnam
8	East Kangean	Off. East Java	Unsold
9	North Bali I	Off. East Java	Sold to Santos
10	North Bali II	Off. East Java	Unsold
11	Tarakan	Offshore East Kalimantan	Sold to Provident Ind. Energy

2003 - New blocks to be offered in 2003			
1	Jambi, on.	South Sumatra	Provisional new acreage
2	South Banten off.	Banten, West Java	Provisional new acreage
3	North East Java, off. I	East Java	Provisional new acreage
4	North East Java, off. II	East Java	Provisional new acreage
5	North East Java, off. III	East Java	Provisional new acreage
6.	NTT off.	East Nusa Tenggara	Provisional new acreage
7	Tanimbar off I	Ianimbar	Provisional new acreage
8	Tanimbar off. II	Tanimbar	Provisional new acreage
9	Kepala Burung on/off. I	Irian Jaya	Provisional new acreage
10	Kepala Burung on/off. II	Irian Jaya	Provisional new acreage

For further information, please contact: Working Area Bidding Team, Directorate General of Oil and Gas, Plaza Centris 1st Floor
 Jl. H.R. Rasuna Said Kav. B-5, Kuningan - Jakarta Selatan 12910
 Phone: 62-21-5268963, 62-21-5268910 ext. 136, Fax: 62-21-5269129

Appendix 15.4: Indonesia Tertiary Sedimentary Basins

Basins tennace	Western Indonesia		Eastern Indonesia	
Producing	1. North Sumatra 3. South Sumatra 5. N. West Java 7. N. East Jasva 9. Tarakan 11. Barito	2. Central Sumatra 4. Sunda 6. N. East Java Sea 8. West Natuna 10. Kutai	12. Seram 13. Salawati 14. Bintuni 15. Bone	
Drilled, discovery, not yet producing	16. Sibolga 18. Bengkulu	17. East Natuna 19. Pati	20. Banggai 22. Biak	21. Sula 23. Timor
Drilled, no discovery	24. Biliton 26. Melawai	25. South Java 27. Asem-asem	28. Akimegah 30. Manui 32. Missol 34. Sahul 36. Spermonde 38. Laring	29. Buton 31. S. Makassar 33. Palung Aru 35. Sawu 37. Waipoga
Unexplored	39. Pembuang	40. Ketungau	41. Lombok Bali 43. Gorontalo 45. West Weber 47. Weber 49. Tukamg Besi 51. South Sula 53. West Buru 55. E. Halmahera 57. N. Obi 59. S. Seram	42. Flores 44. Salabangka 46. S. Halmahera 48. Waropen 50. Tanimbar 52. Buru 54. N. Halmahera 56. S. Halmahera 58. S. Obi 60. Jayapura

APPENDIX 15.5: Current Contract Arrangements

Government Granting Agreements (Cooperation Contracts): The bundle of rights and obligations granted to an investor to invest in cooperation with the GOI in oil and gas exploration and exploitation.

- **Production Sharing Contract (PSC)**
 - Cooperation Contract for oil and gas exploration and exploitation between BP Migas and a private investor (which includes foreign and domestic companies as well as P.T. Pertamina).
 - BP Migas is the supervisor or manager of the PSC
 - The investors are participating interest holders and Contractors
 - Government take is under a production sharing arrangement whereby the GOI and the Contractors take a split of the production measure in revenue based on PSC agreed percentages. Operating costs are recovered from production through Contractor cost oil formulas as defined by the PSC
 - Contractor has the right to take and separately dispose of its share of oil and gas
 - Title of the hydrocarbons passes to the Contractor at export or delivery point
- **Technical Assistance Contract (TAC)**
 - Variation of a Cooperation Contract or PSC
 - Typically used for established producing areas and therefore covers exploitation only
 - BP Migas is the supervisor or manager of the TAC
 - Operating costs are recovered from production
 - Contractor does not typically share in all production
 - For areas where exploration was being encouraged the TAC includes exploration and exploitation.
 - GOI has announced that existing TACs will not be extended
- **Enhanced Oil Recovery (EOR)**
 - Variation of a Cooperation Contract or PSC (i.e. a Cooperation Contract for oil and gas exploitation between BP Migas and a private investor, which includes foreign and domestic companies as well as PT Pertamina).
 - Used for established producing fields with the intent of applying advanced technology to increase the recovery of hydrocarbons in the reservoirs
 - Pertamina is usually a participant along with investors; collectively the Contractor
 - BP Migas is the supervisor or manager of the EOR
 - Operating costs are recovered from production and typically capped at a percentage. In some cases the incremental oil lifted from the enhanced recovery operation may be shared on a production sharing basis.
 - In many cases, the EOR may also include provisions concerning how the parties will conduct petroleum operations.

Agreements Governing the Conduct of Operations:

- **Joint Operating Agreement (JOA)**
 - A separate agreement in addition to the Cooperation Contract
 - Governs the relations of the participating interest holders, defining their rights and obligations, and describing the procedures the Contractors will abide by to conduct petroleum operations.
 - The JOA typically includes: (1) the scope of operations; (2) the designation, rights and obligations of the operator; (3) the establishment of an Operating Committee including

voting rights, meeting procedures and subcommittees; (4) operations by less than all the participating interest parties; (5) production disposition; (6) relinquishment, withdrawal and assignment; (7) confidentiality; (8) force majeure; (9) dispute resolution and choice of law

- Joint Operating Body (JOB)
 - Typically part of the Joint Operating Agreement
 - Governs the operations on behalf of the participating interest holders by establishing a non-legal entity, the Joint Operating Body, to conduct the petroleum operations
 - Representatives of the participating interest parties appoint representatives to the JOB.
 - The JOB prepares operating work program and budgets and carries out the operations pursuant to the JOB Agreement and the Cooperation Contract.
 - The participating interest holders remain the Contractors, and like all Cooperation Contracts, the arrangement is supervised by BP Migas.

APPENDIX 16: OIL COMPANIES AND ORGANIZATIONS

APPENDIX 16.1: Selected Oil Operators in Indonesia

(Name of Working Areas)

AMERADA HESS INDONESIA

(Lematang, Tanjung Aur, pangkah)

Mr. Peter Mills, Acr President & General Manager

Sentral Senayan, 15th floor

Jl. Asia Afrika No. 8, Jakarta 10220

Tel: 572-5744, Fax: 572-5733

Head Office:

Amerada Hess International

33 Grosvenor Place

London, England SW1X 7HY

Tel: (171) 823-2626, Fax: (171) 887-2089

BABAT KUKUI ENERGI

(Babat/Kukui)

Mr. Effendi Siradjuddin, President Director

Cilandak Resort Apt., 1st floor

Jl. Letjen. T.B. Simatupang Kav. 17

Jakarta 12014

Tel: 7581-6232, 750-4963 X-104

Fax: 7581-6232

BG INTERNATIONAL LTD

(Muturi)

Mr. Peter Brock, Act. Country

General Manager

Setiabudi Atrium Building, Suite 810

Jl. H. R. Rasuna Said Kav. 62

Jakarta 12920

Tel: 521-0670 - Fax : 521-0674/5

Head Office:

British Gas International Ltd.

100 Thames Valley Park Drive

Reading, Berkshire RG6 1PT

United Kingdom

Tel: (1189) 292-557, Fax: (1189) 293-165

BINA WAHANA PETRINDO

(Meruap)

Mr. L.D.C. Buddy Beer, President Director

Gelael Bldg, 2nd floor

Jl. Tebet Raya 8-10, Jakarta 12810

Tel: 8370-3620, Fax: 8370-3621

BP

(NW Java Sea, Kangean, Berau, Muriah,

Wiriagar, W. Arguni, E. Arguni, Babo, Bawean)

Mr. Bill Schrader, President/Resident Mgr

Perkantoran Hijau Arkadia, Tower D

Jl. Letjen. TB Simatupang, Kav. 88

Jakarta 12520

Tel: 7883-8000, Fax: 7883-8333

Head Office:

British Petroleum

Uxbridge 1,

Hariefield Road, Uxbridge, Middlesex

UB8 1PD, United Kingdom

Tel: (01895) 877-007, Fax: 01895-877-877

BUMI SIAK PUSAKO

(CPP)

Mr. Dedi Saroji, General Manager

Menara Bank Danamon Lt. 20

Jl. Prof. Dr. Satrio Kav. E IV / 6, Kawasan

Mega Kuningan, Jakarta 12950

Tel. 5799-1552, Fax: 5799-1553

CALTEX PACIFIC INDONESIA

(Natuna Sea C, Natuna Sea B, Rokan,

MFK, Kisaran, Siak)

Ir. Humayunbasha, President Director

Sarana Jaya Bld. 17th floor

Jl. Budi Kemuliaan 1/1, Jakarta 10111

Tel: 351-2151, Fax: 351-2065(6)

Head Office:

Chevron Texaco Overseas Petroleum Inc.

ChevronTexaco Park

Bollinger Canyon Road, Building B

San Ramon, California 94583-2324

Tel: (925)842-1000

CNOOC

(Salawati, Jabung, Bangko, SE Sumatra,

Sokang)

Mr. C.W. Murray, President & Gen.

Manager

Jakarta Stock Exchange Bld. 7th Floor

Jl. Jendral Sudirman Kav. 52, Jakarta 12190

Tel: 515-1001, Fax: 515-9525

CONOCO PHILLIPS INDONESIA

(S. Sumatra Corridor PSC and TAC, South Jambi B, Natuna Sea Block B, Nila, Ketapang/ N. Madura, Warim/Papua, Sakakemang JOB, Pangkah, Banyumas, Block A (Aceh), Korinici Baru/Central Sumatra, Bentu/Central Sumatra)

Mr. Paul Warwick, President & CEO

Wisma 46, Kota BNI, 21st floor

Jl. Jend. Sudirman Kav. 1

Jakarta 10220

Tel: 574-2120, Fax: 574-2112/3

CONTINENTAL -WISDOM

(Bengara)

Mr. Richard L. McAdoo, President & CEO

Jl. Kenanga 6, Cilandak, Jakarta 12560

Tel. 781-7055, Fax: 781-7055

COSTA INT. GROUP

(Gebang)

Nasrun Ahmad, General manager

Menara Global, 7th floor

Jl. Jend. Gatot Subroto Kav 27, Jakarta 12950

Tel. 527-5230, Fax: 527-5240

ENERGY EQUITY

(Bone, Sengkang,, Gajah Besar, Biru, Talang Babat)

Mr. Paul Ivan Edwards, President

Plaza 89 – Suite 802

Jl. H.R. Rasuna Said Kav. X-7/No.6

Jakarta 12940

Tel: 522-2806, Fax: 522-2807

Head Office:

Energy Equity Corporation Ltd.

1162 Hay Street, West Perth WA 6005

Perth 6000, Western Australia

Tel: (619) (9) 366-4777, Fax: 366-4778

ENI INDONESIA LTD

(Malagot, Ambalat)

Mr. Luca Bertelli, Managing Director

Plaza Kuningan, South Tower, 9th floor

Jl. H.R. Rasuna Said Kav. C11-14

Jakarta 12940

Tel: 3000-3200, Fax: 3000-3230

EXSPAN NUSANTARA

(C and S. Sumatra, Pasemah, Barisan/Rimau, Tomori, Samboja, Toili, Yapen, Bengara I)

Mr. Darmoyo Doyoatmojo, President
Director

Bidakara Bldg., 17th floor

Jl. Jend. Gatot Subroto Kav. 71-73

Jakarta 12870

Tel: 8399-1010, Fax: 8399-1011

EXXONMOBIL OIL INDONESIA

(N. Sumatra B, NSO+NSO Ext., Langsa, Cepu, Pase, Madura St.)

Mr. Ronald I. Wilson, President & GM

Wisma GKBI, 29th floor

Jl. Jendral Sudirman 28, Jakarta 10210

Tel: 574-0707 Ext. 1000, Fax: 574-0606

Head Office:

ExxonMobil Oil Corp.

5959 Las Colinas Blvd

Irving, Texas 75039

Tel: (972) 444-1107/8/9

GAT BANGKUDULIS PETROLEUM CO. LTD

(Bangkudulis)

Mr. Baduraman Dorpi Parlindungan,
President Director

Jl. R.S. Fatmawati 31A, Jakarta 12430

Tel: 751-1177, 781-7055, Fax: 765-8293

GOLDEN SPIKE LTD (PT. KODEL)

(Raja-Pendopo, Pasiriaman)

Mr. Achmad Nawawi, General Manager

Menara Rajawali, 20th floor

Jl. Mega Kuningan-Lot 51, Jakarta 12950

Tel: 576-1333, Fax: 576-1736

HALLIBURTON ENERGY DEVELOPMENT

(Abab/Raja)

Mr. Steve Jacobs, Chief Executive Director

Graha Simatupang Tower 2B, 6th floor

Jl. Letjen. TB Simatupang Kav. 38

Jakarta 12540

Tel. 782-9420, Fax: 782-9422

PETROSELAT LTD

(Selat Panjang)

Mr. Wang Wuhe, President Director

Wisma BSG - 11th floor

Jl. Abd. Muis Kav 40, Jakarta 10160

Phone: 386-2550

Fax: 3483-4648

INPEX CORPORATION*(Attaka, Masela)*

Mr. Sadafumi Tanigawa, General Manager
Mid Plaza I, 7th floor
Jl. Jendral Sudirman Kav. 10-11,
Jakarta 10220
Tel: 570-0557, 570-0540, Fax: 570-0575

Head Office:

INPEX Corporation
17th Fl. Ebisu Neonato No 1-18
Ebisu 4-Chome
Shibuya-ku, Tokyo 150, Japan
Tel: (03) 5448-1201, Fax: (03) 5448-1242

INDO PACIFIC RESOURCES LTD*(Bawean)*

Mr. David Nunn, President & General
Manager
World Trade Center 14th floor
Jl. Jend. Sudirman Kav. 29-31, Jakarta 12920
Tel. 521-1829, Fax: 521-1709

INDOSPEC ASIA PETROLEUM*(Banga Dua)*

Mr. Burhanuddin Bur Maras
President Director
Ratu Plaza Bldg., 2nd floor
Jl. Letjen. T.B. Simatupang Kav. 20
Jakarta 12560
Tel: 7884-9696, Fax: 7884-9694

KALREZ PETROLEUM LTD*(Bula/Seram)*

Mr. Russell E. Brimage, General Manager
Wisma Pondok Indah Room 306
Jl. Sultan Iskandar Muda Kav. VTA
Pondok Indah, Jakarta 12310
Tel. 769-6977, Fax: 769-7012

Head Office:

Kalrez Energy
Level 2, 8 Parliament Place
West Bird Perth WA 6005, Australia
Tel: N/A, Fax: N/A

KODECO ENERGY COMPANY*(Poleng, W. Madura)*

Mr. Hong Soon Yong, President
Jakarta Stock Exchange Bldg., 10th floor
Jl. Jend. Sudirman Kav. 52-53

Jakarta 12190

Tel: 515-1170, Fax: 515-1175

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Kodeco Energy Company Ltd
10th Fl Donghwa Bld 58-7
Susomun- Dong, Joong Ku, South Korea
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KONDUR PETROLEUM*(Malaka St)*

Mr. Rennier Latief, President Director
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**KOREA NATIONAL OIL
CORPORATION***(Wokan)*

Mr. Nam Kung Yong, General Manager
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Tel: 390-7240, Fax: 390-7238

KUFPEC INDONESIA*(Seram)*

Mr. D.G.S. Lamb, President
Menara Citibank, 6th floor
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Jakarta 12310
Tel: 766-2840, Fax: 766-2845

LAPINDO BRANTAS*(Brantas)*

Mr. Rennier Latief, President Director
Menara Global, 26th floor
Jl. Jend. Gatot Subroto Kav. 71-73
Jakarta 12870
Tel: 527-0454, Fax: 527-0434

LIRIK PETROLEUM*(Lirik)*

Mr. Hary Wahjudi, General Manager
Satmarindo Bldg. 2nd floor
Jl. Ampera Raya 5, Jakarta 12560
Tel: 780-4527, 780-4468, Fax: 780-4492

LUNDIN BV*(Blora, Banyumas, Sareba)*

Mr. Marc Jamet, General Manager
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MEDCO MOECO LANGSA LTD TAC

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PATRINDO PERSADA MAJU

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PELANGI HAURGEULIS RESOURCES

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PERMINTRACER PETROLEUM

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RIMS – GOCKLIT

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PUTRA KENCANA PETROGAS

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SANTOS PTY LTD

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SEA UNION ENERGY

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SEMBRANI PERSADA OIL

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SHELL COMPANIES IN INDONESIA

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TITAN RESOURCES

(NE Natuna)

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TOTAL E & P INDONESIA

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UNOCAL INDONESIA

(Sesulu, W. Pasir, Rapak, Lompa/Makassar St, Sangkarang, Ganal)

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VIRGINIA INDONESIA CO (VICO)

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APPENDIX 16.2: Oil Field Service Companies and Oil and Gas Drilling Contractors

APEXINDO PRATAMA DUTA TBK

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DOWELL SCHLUMBERGER

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GEMILANG TECHNODRILL

PARIPURNA

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CONTRACTORS**

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RB DRILLING

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SANTA FE SUPRACO

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APPENDIX 16.3: Indonesian Related Oil and Gas Associations

Indonesian Petroleum Association (IPA)

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Vice President: Wahyudin Yidana (Caltex)
Supramu Santosa (Star Energy)
Secretary : Chris Newton (Santos Asia)
Treasurer : Rashid I. Mangunkusumo (EXSPAN)
Directors :
Roland Festor (Total)
Rennier Latief (Kondur)
Bambang Nugroho (Pertamina)
C.W. Murray (China NOOC)
Bill Schrader (BP)
Ronald I. Wilson (ExxonMobil)
Sadafumi (Tanigawa)
Executive Director: Suyitno Patmosukismo

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Oil and Gas Drilling Association

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EXECUTIVE SUMMARY

Indonesia ranks seventeenth among world oil producers, with approximately 1.8 percent of the world's production. At an unofficial 1.01 million barrels of oil per day (b/d) by the end of 2003, Indonesia's production of crude oil and condensate continued a gradual decline from 1.25 million b/d in 2002, 1.34 million b/d in 2001, and 1.41 million b/d in 2000. Indonesia's oil reserves are approximately 9.7 billion barrels.

The country ranks sixth in world gas production, with proven and potential reserves between 170-180 trillion cubic feet (TCF). Indonesia produced 3.04 TCF of gas in 2002, rising unofficially to about 3.08 TCF in 2003. Indonesia also remained the world's largest exporter of liquefied natural gas (LNG) in 2002 at 26.2 million metric tons (MT). Although it enjoys a 22.9 world market share, this dominance is under threat from newer producers in Qatar, Australia and Russia.

Despite the gradual decline in oil production, the industry remains a key sector that generates strong cash flows. In 2002, oil and gas contributed \$12.1 billion or 21.2 percent of total export earnings and about 25 percent of government budget. Though significant, this is in stark contrast from 1990, when the oil and gas sector contributed 43% of export earnings and 45% of government revenues.

The 2004 budget assumes crude oil production of 1.15 million b/d, a target that will be difficult to meet unless production levels improve. That budget also assumes an exchange rate of Rp 8,700/US\$ and an oil price of \$21/barrel. Actual crude oil prices for SLC during August 2003 were \$28.03 per barrel.

With substantial reserves of natural gas, coal and geothermal, Indonesia could remain a net energy exporter for a longer period than current forecasts. To do so, the government must implement legislation and policies that will attract new private direct investment and rationalize use of Indonesia's energy resources. Energy policy reform is necessary in order to maintain Indonesia's status as a net oil exporter and enhance efficient use of energy resources.

In line with its former International Monetary Fund (IMF) commitments, the government continued to hike domestic fuel prices in 2002 by eliminating subsidies. Fuel prices were raised across the board first in October 2000, in June 2001 and again in January/March 2002 to reduce the GOI's fuel subsidy burden to Rp 30.3 trillion in 2002. The GOI increased fuel prices again in January 2003; however, it later reversed much of the increase due to widespread public protest. This, combined with high international oil prices, raised the actual 2003 fuel subsidy to Rp 30 trillion. The government is unlikely to raise fuel prices again until after the 2004 elections.

2002-2003 were important transition years for Indonesia's oil and gas industry, following passage of a new oil and gas law in October 2001. Law 22/2001, which replaced the 1960 Oil and Gas Law and Law for Pertamina 8/1971, required the upstream and downstream sectors to deregulate within two years and four years, respectively. The law also mandated the end of Pertamina's monopoly over downstream oil distribution and marketing of fuel products. Pertamina's upstream responsibilities to manage the Production Sharing Contracts (PSCs) also shifted to the central government.

The new law created two new governmental bodies: the Executive Body that takes over Pertamina's upstream functions and the Regulatory Body that supervises downstream operations. The Executive Body, BP Migas, was established in July 2002. It took over Pertamina's upstream regulatory functions and management of oil and gas contractors. The downstream regulatory body (BPH Migas) was established in December 2002. When fully operational, it will license downstream operators to assure sufficient natural gas and domestic fuel supplies and the safe operation of refining, storing, transport and distribution of petroleum products.

The government has not yet completed its implementing regulations for the upstream and downstream sectors, which were due by the end of 2003. The industry continues to work with the GOI on the draft regulations in an effort to improve the sector's investment climate. At the time of this report, the industry had serious concerns about the draft regulations in a few key areas, including:

- Sanctity of contract for existing PSCs (grandfathering provisions);
- Requirement for PSCs to first offer any sale or transfer of its participating interest to a national company;
- Lack of clarity on the oil and gas domestic market obligation (DMO);
- Potential overlapping responsibilities between the upstream and downstream authorities BP Migas and BPH Migas, including natural gas transportation via pipeline.

In 2002

- The dollar value of oil and gas exports declined to \$12.1 billion in

2002, compared with \$12.6 billion in 2001.

- Oil and gas imports increased in 2002 to \$6.5 billion, compared with \$5.5 billion a year earlier.

Crude Oil

Reserves: 9.7 billion barrels.

Gross Production: 1.01 million barrels per day (2003, unofficial).

Export revenue: \$6.2 billion in 2002.

In 2002, Indonesia produced an average of 1.252 million b/d, down 6.9 percent over the previous year level of 1.344 million b/d. Unofficially, the country's production continued to decline in 2003 to an average 1.01 million b/d. Most of the country's major producers were responsible for the 92,700 b/d production drop in 2002. Foreign PSCs accounted for 85% of Indonesia's crude output in 2002.

Expenditures by petroleum companies declined 18.7 percent in 2002 to \$3.42 billion from \$4.2 billion in 2001.

The number of new exploration and appraisal wells drilled in 2002 up slightly 88 wells from 79 wells in 2001 after peaking up at 145 wells in 1998.

Unocal continued its ambitious drilling program in the deepwater, offshore East Kalimantan blocks.

ExxonMobil continued efforts with Pertamina, without success, to extend its contract for the Cepu block in East Java.

The government awarded 15 new production sharing contracts in 2003,

compared with 1 in 2002, and 6 in 2001, down from a record 29 contracts in 1997. Major international and U.S. companies were largely absent from the bidding on these new exploration blocks. The GOI will offer another 10 blocks in 2004. Ten contracts were relinquished between January 2002 and September 2003.

Indonesian crude production profited from high world oil prices, averaging \$25.11/barrel for Sumatran Light Crude (SLC) in 2002 and \$29.02 for the first eight months of 2003. As a result of OPEC decisions to reduce oil production, Indonesia received four quota declines, 77,600 b/d in February 2001, 52,000 b/d in April, 42,000 b/d in September and a further 78,000 b/d in January 2002. OPEC's quota reductions had no impact on Indonesia as the country produced well under its quota throughout this period.

Indonesia's major crude oil customers (in rank order) were Japan, South Korea, Australia, Singapore, China and the United States. Indonesia's overseas markets generally showed a decline in sales in 2002 with the exception of China, USA and Thailand.

Natural Gas

Reserves: 176.6 trillion standard cubic feet (TSCF).

Gross Production: 3,036 billion cubic feet (BCF).

Export revenue from LNG and LPG: \$5.9 billion in 2002.

Indonesia has natural gas reserves of over 176.6 TSCF – 90.3 TSCF proven and 86.3 TSCF probable/possible.

Indonesia's largest producers are ExxonMobil, Total, Vico, BP and Unocal operating under production sharing contracts.

Indonesia, which traditionally exports gas in the form of LNG, started natural gas pipeline exports to Singapore in January 2001, totaling 32 billion cubic feet (BCF) from fields within 3 PSCs in West Natuna operated by ConocoPhillips Indonesia, Star Energy and Premier. The PSCs deliver 325 million cubic feet per day (mmcf) from Indonesia to Singapore (Sakra Island) via a 650-kilometer sub-sea pipeline. The gas is used by power generating companies and petroleum and petrochemical plants. Revenues from the gas sales are projected to reach \$8 billion over the life of the 22-year contract.

The government inaugurated a second gas transmission pipeline to Singapore in August, 2003. The 477-km pipeline links the Grissik gas plant in the Corridor PSC in South Sumatra with Sakra Island, Singapore. The gas supply volume from South Sumatra fields operated by ConocoPhillips and PetroChina to Singapore will eventually reach 350 mmcf. The pipeline was built for \$420 million and should generate \$9 billion in revenues to Indonesia over 20 years.

Indonesia celebrated the first delivery of natural gas to the Duyong gas platform offshore Peninsular Malaysia from Indonesia's South Natuna Sea Block B PSC (operated by ConocoPhillips) in August 2002. Pertamina supplies 100 mmcf of natural gas (increasing to 250 mmcf by 2007) to Petronas for 20 years from South Natuna Sea Block B. Revenues from the gas sales are projected to reach \$6.2 billion over the life of the contract.

LNG and LPG

Most of Indonesia's natural gas is processed into LNG and LPG, followed by domestic power generation and petrochemical production. LNG production at Arun and Badak (Bontang) was 26.2 million metric tons (MT) in 2002, an increase from 2001's production of 24.3 MT. Japan, South Korea and Taiwan were the key markets for LNG.

LPG production declined slightly to 2.1 MT in 2002 from 2.2 MT in 2000, while exports to the four top customers -- Japan, Hong Kong, Taiwan and Australia -- dropped to 1.27 MT.

In 2002 and 2003, there was mixed news for Indonesia's LNG producers:

In August 2002, Indonesia lost a bid to supply \$10 billion in LNG to China's first LNG receiving terminal at Guangdong. However, Indonesia's Tangguh LNG project won a separate contract to sell 2.6 MT/year of LNG to a prospective LNG terminal in Fujian for 25 years, worth about \$8.5 billion. Tangguh also won a preliminary contract to supply 1.35 MT/year of LNG to South Korea's K Power and POSCO for a 20-year term starting in 2005.

In July 2003, Qatar beat Indonesia in a bid to supply 1.7 MT of LNG per year to Taiwan's planned Ta-Tan LNG terminal.

During 2003, Indonesia began lobbying Japan to extend 12 MT worth of LNG contracts set to expire in 2010. In August and December 2003, BP Migas signed an MOU with Marathon Corporation for 6 MT per year and a Heads of Agreement (HOA) with Sempra Energy for 3.7 MT

per year beginning in 2007 to supply LNG to a proposed LNG receiving terminal in Baja California.

In October 2003, ChevronTexaco unveiled its project to erect a storage and regasification LNG terminal 13 miles offshore Baja California. ChevronTexaco is currently holding possible partnership discussions with Pertamina in the Donggi-Matindok area of Central Sulawesi.

Tight production levels and desired new gas for fertilizer plants may cause the GOI and some PSCs to meet a portion of their LNG export quantities by purchasing LNG cargoes abroad in 2004.

Refining and Imports

Installed capacity: approximately 1.057 million b/d at nine state-run refineries.

Capacity utilization: 96.8 percent.

Growing domestic consumption and limited capacity at Indonesia's nine refineries account for the increase in crude oil and fuel product imports. Domestic fuel consumption increased to 57.8 million kiloliters in 2002, about 7.5 million kiloliters higher than pre-crisis levels. In 2002, Indonesia's crude oil imports rose to 124.1 million barrels, largely from Saudi Arabia and Nigeria. Fuel product imports rose to 106.9 million barrels from 89.6 million barrels in 2001.

Petrochemicals

The petrochemical industry was again stagnant in 2002, with no new plants completed. In the wake of the financial and economic crisis that erupted in mid-1997, projects under construction remained in limbo. However, in July

2003, the government announced the impending resumption of 14 large strategic projects, valued at \$9.3 billion, which were suspended in 1998. These projects include the \$290 million ammonia/urea fertilizer plant in Kujang, West Java, the \$360 million Unit 5 Kaltim fertilizer plant, the \$35 million hydrogen plant at AAF/Aceh, a \$256 million fertilizer plant in East Kalimantan, a \$310 million urea fertilizer plant at PIM/Aceh and a \$900 million aromatic plant in Tuban, East Java. These projects are still pending international financing, however.

Regional Autonomy/Decentralization

On January 1, 2001, Regional Autonomy Law 22/1999 and Fiscal Decentralization Law 25/1999 came into effect. Law 25/1999 contains formulas for sharing revenue between the central government and various regional authorities. Local misunderstanding of the oil and gas revenue allocations continues, raising expectations and causing regional administrations and the public to overestimate future transfers. By definition, the “government share” is tax revenues plus its portion of oil and gas profits after the PSC share and cost recovery are deducted. However, the central, provincial and regional government revenue splits shown in the table below only apply to oil and gas profits after cost recovery. Therefore, depending on the amount of cost recovery, provincial and regional oil and gas income can be significantly different than the reported gross oil/gas revenues.

Shares of state revenue* before and after Law No. 25/1999

Type of revenue	Central Govt.	Province	Regencies
Before (%):			
- Oil	100	-	-
- Natural gas	100	-	-
- Mining land rent	20	16	64
- Mining royalties	20	16	64
- Land/building tax	10	16.2	64.8
- Duties on land/building acquisition	20	16	64
After (%):			
- Oil	85	3	12
- Natural gas	70	6	24
- Mining land rent	20	16	64
- Mining royalties	20	16	64
- Land/building tax	-	16.2	64.8 (+)
- Duties on land/building acquisition	-	16	64 (+)

* State revenue refers to net oil and gas profits after PSC share and cost recovery are deducted. Special autonomy provisions for Aceh and Papua give those provinces 70 % of net oil and gas profits after PSC share and cost recovery, with the remaining 30% to the government.

In an attempt to clarify the ongoing debate over the regions' share of oil and gas revenues, the Ministry of Finance issued Decree 237/2003 in June 2003. The decree estimates the allocation of oil and gas revenues to the provinces, regencies and cities for 2003, as shown below:

Province	Est. Allocation (Rp millions)	Est. Allocation (\$US)
Aceh	2,102,082	253,250,000
N. Sumatra	56,721	6,830,000
Riau	3,218,702	387,800,000
Jambi	31,008	3,735,000
S. Sumatra	639,342	77,030,000
Lampung	199,638	24,050,000
Bangka Belitung	711	85,600
DKI Jakarta	60,134	7,245,000
W. Java	481,061	58,000,000
C. Java	602	72,500
E. Java	29,425	3,545,000
E. Kalimantan	3,873,452	466,680,000
C. Sulawesi	416	50,120
Maluku	4,372	526,700
Papua	71,639	8,630,000

Rp 8300 = \$1US

The estimated allocations are based on expected oil and gas production for the year. Further study is needed to determine the actual amount of oil and gas revenues flowing to the regions and whether these proceeds have improved the quality of life in those areas.

Major Events for Oil in Indonesia

Year	Events
1890	Telaga Said production field sold to a company that later merged to form Royal Dutch Shell. First production was in 1892.
1912	Standard Oil of New Jersey through its Dutch subsidiary received permission to explore for oil in South Sumatra.
1921	The Talang Akar field discovered, which proved to be the biggest find before WWII.
1942	Japanese took over most oil fields during WWII and slow production
1944	Caltex' Minas field discovered. Largest oil field in Southeast Asia
1945	Indonesia declared independence from The Netherlands
1961	Government signs first PSC, with Asamera for the Block A PSC in Aceh.
1962	Pan American Oil Company signed the first contract of work with Pertamina.
1962	Indonesia joined OPEC
1968	National oil companies Permina and Pertamina merged to form Pertamina
1978	First LNG plant entered production
2001	The Government revised Oil and Gas Law
2002	Upstream/downstream bodies formed.
2003	Pertamina becomes a limited liability company.

THE INSTITUTIONAL FRAMEWORK

“All natural resources in the soil and the waters of the country are under the jurisdiction of the State and shall be used for the greatest benefit and welfare of the People.”

-Article 33, Indonesian Constitution

The Indonesian Parliament (Dewan Perwakilan Rakyat – DPR) passed the oil and gas bill into law on October 23, 2001. The new law replaces Oil and Gas Law No. 44/1960 and Law for Pertamina No. 8/1971. It reduces the government's power over the petroleum sector and allows for open competition in the downstream oil and gas distributing and marketing area. The new law authorizes the establishment of an implementation agency ("badan pelaksana") and regulatory agency ("badan peraturan") to assume state oil and gas company Pertamina's roles. The implementation agency has replaced Pertamina in managing Production Sharing Contract (PSCs) with private oil and gas companies, thus eliminating the conflict-of-interest inherent in upstream producer Pertamina regulating the activity of its competitors. The law also removed Pertamina's monopoly in the downstream sector with the regulatory agency assuming the responsibility for managing natural gas and domestic fuel distribution and supply.

The GOI generally met the law's stipulation that the two new agencies be established within one year of the law's enactment, and Pertamina establish itself as a limited liability company ("persero") within two years (see below). Pertamina

does maintain its overall responsibility for domestic fuel supply and distribution for four years after the law's enactment. Existing PSC's will be grandfathered and in effect until expiration of the contract. The GOI has issued three of five required implementing regulations under the law -- Pertamina's transition to a limited liability company, and the establishment of the implementing and regulatory agencies. As of the end of 2003, however, the government had not yet issued the remaining two implementing regulations, on the upstream and downstream sectors.

Article 33 of the Constitution still requires the government to continue its key role in the management of Indonesia's energy sector. All energy activities dealing with petroleum and gas fall under the Ministry of Energy and Mineral Resources, which is charged with creating and implementing Indonesia's energy policy. The Ministry of Energy and Mineral Resources is divided into several directorates, with the Directorate General of Oil and Gas (MIGAS) responsible for all aspects of the petroleum industry, including its development, employee training, and promulgating regulations.

BP Migas

On July 16, 2002, President Megawati signed Government Regulation No 42/2002, establishing a new Executive Board for oil and gas upstream operations as required by Oil and Gas Law No 22/2001. This upstream implementing body or Badan Pelaksana Minyak dan Gas Bumi (BP Migas) assumes the long role of Pertamina's regulatory functions and

responsibilities in managing oil and gas contractors.

BP Migas' main tasks and authorities are:

1) to provide recommendations to the Minister in preparing and offering work areas and cooperation contracts; 2) to sign cooperation contracts; 3) to control upstream business operations and 4) to appoint sellers of the government's share of oil and gas. The board is a non-profit state legal entity, acts on behalf of the government as party to the cooperation contract with business entities, but at the same time also acts as a board, which controls all oil and gas business operations.

Although BP Migas has been managing upstream regulatory activities since mid-2002, the government has not yet issued upstream implementing regulations in accordance with Oil and Gas Law 22/2001. Current and prospective upstream players hope the government will issue these regulations early in 2004 and that they will bring greater clarity to the sector.

BPHMigas

On December 30, 2002 President Megawati Sukarnoputri signed a Government Regulation (PP) No 67/2002 establishing a new downstream regulatory body, the Badan Pengatur Hilir Minyak dan Gas Bumi (BPH Migas), which assumes the role of Pertamina in controlling downstream activities. Among BPH Migas' responsibilities are regulating and determining the supply and distribution of oil-based fuel, regulating the transmission and distribution of natural gas, allocating fuel to meet national oil fuel reserves, the use of oil and gas

transportation and storage facilities, setting tariffs for gas pipeline use, setting the price of natural gas for household and small consumers and making recommendations on pipeline levies and setting the price of pipeline rights.

Despite this long list of responsibilities, the full scope of BPH Migas' activities requires clarification. Potential new downstream participants hope the government will provide this clarification in new downstream implementing regulations, which are expected in 2004.

BPH Migas is a smaller body than its upstream counterpart, BP Migas. BPH Migas consists of a committee of nine (one Chairman and eight members). Committee members are appointed by the President, based on the recommendation of the Minister of Energy and Mineral Resources and after approval by the House of Representatives (DPR). The Chairman must periodically report to the President (every six months or as requested), via the Energy Minister.

Pertamina

On June 18, 2003, President Megawati Sukarnoputri signed a government regulation (PP) No. 31/2003 regarding the transformation of state oil and gas company Pertamina into a limited liability company (Persero). The new regulation is in line with efforts to establish a new competitive and efficient entity, which is expected to increase economic activity and the welfare of the people.

Under the new regulation, all state assets in Pertamina as well as all assets of Pertamina including its subsidiaries and joint venture will serve as the capital of the new entity. The Minister of Finance

based on a joint evaluation by the Minister of Energy and Mineral Resources and the Minister of Finance will determine the amount of capital of the new entity. The new entity has authority from the government to supply fuel oils for domestic consumption, with compensation to be provided by the government. It also states that at the time of the establishment of the new entity, activity on geothermal businesses will be handed over to the new entity but within two years the entity has to establish a new subsidiary. A joint decree by the Minister of Finance, Minister of Energy and Mineral Resource and State Minister for State Owned Company will be issued in implementing the new regulation.

Pertamina significantly contributes to Indonesia's petroleum output. It ranks 9th in crude oil production and was Indonesia's 5th largest producer of natural gas in 2002. Pertamina executives have expressed their resolve to enhance Pertamina's position in the upstream sector to position the company for petroleum sector deregulation.

The company has planned a total investment of \$2.08 billion over five years. Two thirds of the investment will be in upstream business and the remainder in downstream. Pertamina needs funds to upgrade its aging refineries, LPG and fuel depots and distribution infrastructure, replace and supplement its old shipping fleet, and for upstream acquisitions.

Pertamina has seriously studied business prospects in Iraq even though its October 2002 exploration contract for Block 3, Western Desert was temporarily subject to force majeure in April 2003 due to the war in Iraq. Pertamina has an office in Baghdad, which is staffed on a rotating

basis. Pertamina is presently analyzing seismic data for its contract area and will not begin exploration activity until the validity of its contract with the new Iraq government is confirmed and the security situation improves. Pertamina plans to invest \$24 million over three years for the block, which has estimated oil reserves of 3 billion barrels of oil.

Government Agreements and Contracts

There are two categories of agreements and contracts for Indonesia's petroleum industry. The first category refers to the bundle of rights and obligations granted to an investor to invest in cooperation with the GOI in oil and gas exploration and exploitation. These types of contracts are the Production Sharing Contract (PSC), the Technical Assistance Contract (TAC), and the Enhanced Oil Recovery (EOR) contract, defined as follows:

Production Sharing Contracts:

- A cooperation contract for oil and gas exploration between BP Migas and a private investor (which includes foreign and domestic companies, as well as PT Pertamina);
- BP Migas is the supervisor or manager of the PSC;
- Investors are participating interest holders and Contractors;
- The government take is under a production sharing arrangement whereby the GOI and the Contractors take a split of the production measure in revenue based on PSC-agreed percentages;
- Operating costs are recovered from production through Contractor cost oil formulas as defined by the PSC;

- The Contractor has the right to take and separately dispose of its share of oil and gas;
- Title of the hydrocarbons passes to the Contractor at the export or delivery point.

Technical Assistance Contracts:

- Variation of a cooperation contract, or PSC;
- Typically used for established producing areas and therefore covers exploitation only;
- BP Migas is the supervisor or manager of the TAC;
- Operating costs are recovered from production;
- The Contractor does not typically share in all production;
- The TAC can cover both exploitation and exploration if it occurs in an area where the GOI has encouraged exploration;
- Per Oil and Gas Law 22/2001, existing TACs will not be extended.

Enhanced Oil Recovery:

- Variation of a cooperation contract, or PSC;
- Used for established producing fields with the intent of applying advanced technology to increase the recovery of hydrocarbons in the reservoirs;
- Pertamina is usually a participant, along with investors; collectively they are the Contractor;
- BP Migas is the supervisor and manager of the EOR;
- Operating costs are recovered from production and typically capped at a percentage. In some cases, the incremental oil lifted from an EOR operation may be

shared on a production sharing basis;

- In many cases, the EOR may also include provisions concerning how the parties will conduct petroleum operations.

In addition to contracts that give bundles of rights to explore and exploit, the participants in the PSC, TAC or EOR may also enter into separate agreements to discuss how they are going to conduct petroleum operations. These are known as Joint Operating Agreements (JOA) and Joint Operating Bodies (JOB), defined as follows:

Joint Operating Agreements:

- A separate agreement in addition to the cooperation contract;
- Governs the relations of the participating interest holders, defining their rights and obligations, and describing the procedures the Contractors will abide by;
- The JOA typically includes: 1) the scope of operations; 2) designation, rights and obligations of the operator; 3) establishment of an Operating Committee; 4) production disposition; 5) relinquishment, withdrawal and assignment; 6) confidentiality; 7) force majeure; and 8) dispute resolution and choice of law.

Joint Operating Bodies:

- Typically part of the JOA;
- Governs the operations on behalf of the participating interest holders by establishing a non-legal entity, the JOB, to conduct petroleum operations;

- Representatives of the participating interest parties appoint representatives to the JOB;
- The JOB prepares an operating work program and budgets and carries out operations pursuant to the JOB agreement and the cooperation contract;
- Participating interest holders remain the Contractors;
- JOAs are supervised by BP Migas.

Fiscal Decentralization Law

With implementation of a new fiscal decentralization law in January 2001, revenue-sharing formulas came into effect that directed 15 percent of the Indonesian Government's net oil revenues and 30 percent of its net natural gas revenues to provincial and district governments. The GOI's net oil and gas revenues refer to profit after cost recovery and deduction of the PSC share. Of the 15 percent of the oil revenue flowing to the regions, 6 percentage points will go to the regency of origin (where the PSC is located), 6 percentage points will be shared among the other districts in the province, and 3 percentage points will go to the provincial government. The same relative shares apply to gas revenues – 12 percent to the regency of origin, 12 percent among the remaining regencies and 6 percent to the provincial government.

OPEC

Indonesia joined OPEC in 1962 as active member and has hosted important OPEC conferences in 1964, 1976, 1980 and 1997. OPEC member countries meet at least twice a year to coordinate their production policies in light of market

fundamental. Organization of Petroleum Exporting Countries (OPEC) produce about 38 percent of the world's oil and 50 percent of the oil traded internationally. Indonesian Energy Minister Purnomo Yusgiantoro will assume the rotating OPEC presidency beginning January 1, 2004.

In an effort to control oil price volatility and to counter what they saw as softening crude oil prices, the latest Consultative Meeting of the Conference of the OPEC Oil Ministers in September 2003 agreed to cut production by 900,000 barrels per day to 24.5 million barrels per day, effective November 1, 2003. This was due to the gradual return of Iraqi crude to the world market and based on a forecast decline in oil demand in 2004. In addition, OPEC has also urged non-OPEC member countries (Angola, Mexico, Norway, Oman and Russian Federation) to cut oil production by 500,000 barrels per day. Previously OPEC increased production by 900,000 b/d effective June 2003 and Indonesia received a 47,000 b/d quota increase to 1.317 million b/d, although actual output is closer to 1 million b/d.

Country	OPEC Quota (Million B/D)				
	Sep 2001	Jan 2002	Jan 2003	Feb 2003	June 2003
S. Arabia	7,541	7,053	7,646	7,963	8,256
Iran	3,406	3,186	3,377	3,597	3,729
Venezuela	2,670	2,497	2,647	2,819	2,923
UAE	2,205	1,894	2,007	2,138	2,217
Kuwait	1,861	1,741	1,845	1,966	2,038
Nigeria	1,911	1,787	1,894	2,018	2,092
Libya	1,242	1,162	1,232	1,312	1,360
Indonesia	1,203	1,125	1,192	1,270	1,317
Iraq	N/A	N/A	N/A	N/A	N/A
Algeria	741	693	735	782	811
Qatar	601	562	596	635	658
TOTAL	23,201	21,700	23,000	24,500	25,400

Source: MIGAS

The Ministry of Energy and Mineral Resources said that Indonesia intends to

remain an OPEC member despite its falling net oil export volumes. As Indonesia finds it increasingly difficult to maintain a net exporter status, industry experts will continue to question whether the country will keep its OPEC membership.

Other Professional Bodies

IPA

The Indonesian Petroleum Association (IPA) was established in 1971 in response to growing foreign interest in the Indonesian oil sector. Contractors and the government meet frequently to discuss matters such as production ventures and energy economics. The IPA's objective is to use public information to promote the exploration, production, refining and marketing aspects of Indonesia's petroleum industry.

IGA

The Indonesian Gas Association (IGA) was established in 1980 under the sponsorship of Pertamina and key gas producers, Mobil and Huffco. The main objective of IGA is to provide a forum to discuss matters relating to natural gas and to advance knowledge, research and development in the areas of gas technology. IGA also aims to promote the development of infrastructure and cooperation among producing, transporting, consuming and regulatory segments of the gas industry.

The IGA and the IPA sponsored Indonesia's membership on the Permanent Council of the World Petroleum Congress (WPC).

CRUDE OIL

Reserves and Production

In 2002 Indonesia ranked seventeenth among world oil producers, with approximately 1.9 percent of the world's daily production. The GOI places Indonesia's crude oil reserves at 9.7 billion barrels, with proven reserves of 4.7 billion barrels and potential reserves of 5.0 billion barrels. The figures are slightly lower than in 2001. Oil exports were \$6.2 billion in 2002. Total oil and gas exports (including LNG) were \$12.1 billion in 2002 -- 21.2 percent of Indonesia's export earnings, down from 22.4 percent in 2001.

Indonesia crude and condensate production declined in 2002 to an average of 1.252 million barrels/day (b/d) consisting 1.120 million b/d of crude and 131,800 b/d of condensate. This was a 6.9 percent drop from the 2001 level of 1.344 million b/d (1.212 million b/d for crude and 131,900 b/d for condensate). Almost all oil producers (Caltex, CNOOC, Unocal, BP, Petrochina, Pertamina, Vico Total, and ConocoPhillips) reported declines. Continued sluggish investment and a decrease in new exploration were key factors behind the decline.

PT Caltex Pacific Indonesia's production, which accounted for 46.1 percent of the country's crude oil production in 2002, dropped to 577,300 b/d compared to 643,200 b/d in 2001, in large part due to the loss of its CPP block to the Siak regional government in August 2002. The Chinese National Offshore Oil Corporation (CNOOC) became an important industry player in 2002, becoming the second largest producer

after Caltex and accounting for more than 12 percent of all Indonesian production. Indonesian company Exspan bucked the lower production trend by recording by an 11 percent increase in 2002.

In 2003, Indonesia's overall crude oil production continued to decline to an unofficial 1.01 million b/d. Indonesia has a crude production quota of 1.317 million b/d (without condensate) from OPEC, but the country produced below that target, as a result of declining investment and maturing oil fields.

Nevertheless, the government is optimistic it can achieve an oil production target of 1.15 million b/d in 2004. BP Migas believes new production from several existing PSCs will reverse the decline, citing Unocal Indonesia (West Seno), Exspan Sumatra (Matra), ConocoPhillips Indonesia (Belanak), Total Indonesia (Tunu), and PetroChina (Ripah), among others.

Table: Crude and Condensate Production by major producers (1,000 Barrels/Day)

Company	2001	2002	Change (%)
Caltex	643.2	577.3	-10.2
CNOOC	125.7	114.9	-8.6
Exspan	77.0	85.5	11.0
Total	90.0	79.8	-11.3
ConocoPhillips	83.2	69.3	-16.7
Unocal	59.3	56.2	-5.2
BP	50.8	46.5	-8.5
Petrochina	45.8	42.4	-7.4
Pertamina	45.1	40.1	-11.1
Vico	40.8	36.2	-11.3
Others	83.1	103.3	24.3
TOTAL	1,344.0	1,251.5	-6.9

Source: MIGAS

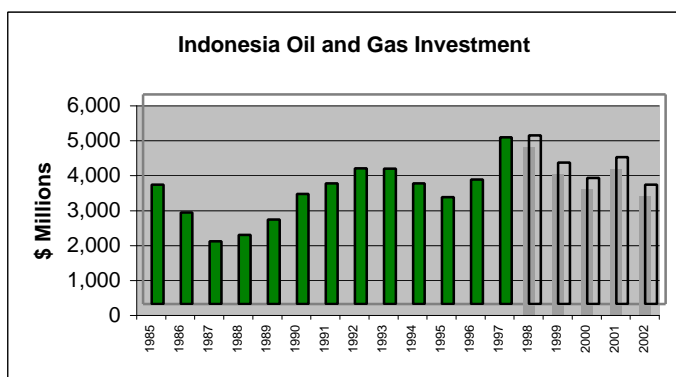
Exploration and Investment

Of an estimated 60 oil basins, over 22 have been extensively explored. Most oil exploration is currently being carried out in the basins of Western Indonesia under PSCs. The bulk of Indonesia's oil reserves are located onshore and offshore in Central Sumatra and Kalimantan. The Government has placed increased emphasis on developing oil reserves in remote locations, such as Papua, where proven reserves are estimated at 138.4 million barrels.

The oil and gas industry today faces several crucial problems, particularly in the upstream sector, due to its aging oil and gas assets. Officials hope oil contractors will aggressively increase exploration activities to look for new reserves. With no significant oil discoveries in western Indonesia in the last 10 years, the government hopes eastern Indonesia's frontier and deep-sea areas may contain sizeable oil reserves.

The number of exploration drilling wells completed in 2002 dropped sharply to 53, consisting of 33 wildcat wells and 20 appraisal wells. Traditionally high, the associated success ratio (successful wells versus wells drilled) reached 54.7 percent, up from 48.1 percent in 2001 and 52.4 percent in 2000.

Pertamina and BP Migas reported that many oil companies shelved a number of investment plans in 2002 due to uncertainty in a number of important areas, such as contract sanctity, regional autonomy, security, manpower, taxes, and the Oil and Gas Law implementing regulations. According to the Energy Ministry's Oil and Gas Directorate (MIGAS), oil companies realized 92 percent of their budgeted expenditures in 2002, a total of \$3.4 billion. This reflects a 19 percent decline from \$4.2 billion in 2001. In 2003, the government forecast that oil companies would expend \$6.7 billion, including \$2.5 billion for exploration and development and \$3.6 billion for production.



Seismic Activities

According to MIGAS, a total of 20,337 kilometers of seismic combined 2-D and 3-D

activities was carried out in 2002, figures which have trended steadily downward since the 1997 peak.

Exploration Blocks Awarded

The government awarded 15 oil and gas exploration blocks in 2003, compared with one in 2002 and six in 2001. In August 2003, eight of the fifteen blocks were awarded through a regular bidding process, while seven were awarded in December through a special bidding round for blocks that were unawarded previously. Participants in the bidding rounds were predominantly small and

medium oil companies, some with little previous experience in Indonesia. The government plans to formally offer an additional 10 blocks in 2004. The fifteen contracts are Merangin I Onshore (Medco), Merangin II Onshore (PT Sele Raya), Bulu Offshore (PT Petroland Energy), NE Madura I (KNOC and PIDC consortium), NE Madura II (KNOC and PIDC consortium), South Madura (Eksindo Petroleum Tabuhan), North Bali II (Santos), and Tarakan (Provident Energy), Anambas Offshore (Genting Oil), Palmerah Onshore (Tately NV), Biliton Offshore (Mitra Archipelago), Bangkanai Onshore (PT Elnusa), Bontang Offshore (PT Eksindo), Halmahera Offshore (PT Tri Visindo), W.Salawati Offshore (Pearl Oil), and Asmat Onshore (PT Indonesia Papua Petroleum). Exploration commitments by the winners totaled \$343.5 million with signing bonuses to the government totaling \$26.7 million.

The Government revamped procedures and improved some terms and conditions for exploration and production contracts in a bid to increase their attractiveness. Previously, oil and gas companies could only receive a concession through an official tender. Now, the government also accepts proposals for blocks without waiting for a formal bidding session. Under this special bidding process, after a company applies to acquire a new exploration block, the government invites other bidders to participate. If no other bidder emerges within a set timeframe, the government grants the block to the sole bidder. The government also offered some more attractive terms and conditions for new exploration blocks in 2003. Winning PSCs would get between 20 percent to 25 percent splits for oil and 35 percent to 45 percent for gas. Under

older PSC terms, companies generally receive a 15 percent split for oil and 30 percent split for gas. The government also set first tranche petroleum (FTP) at 10 percent.

The total number of active oil contracts through October 2003 was 160.

Mergers and Acquisitions

Hong Kong-incorporated oil company China National Oil Offshore Company (CNOOC) acquired Repsol-YPF assets in Indonesia in January 2002, becoming the largest offshore oil producer in Indonesia.

Conoco's acquisition of Gulf Canada in 2001 led to a change of Gulf Indonesia Resources' president, but until September 2002 Conoco Indonesia and Gulf Indonesia Resources continued to exist as separate enterprises in Indonesia even as the Conoco parent company assumed 75% ownership of Gulf Indonesia Resources. Conoco purchased the remaining shares of Gulf Indonesia Resources in July 2002. The two units were merged in September 2002 to form ConocoPhillips Indonesia.

Mergers:

- Conoco & Phillips - ConocoPhillips, Sept 2002.
- Chevron & Texaco – ChevronTexaco, Sept 2001
- Santa Fe Snyder & Devon – Devon Energy Corp, Aug 2000.
- BP Amoco & Arco – BP, Apr 2000.
- TotalFina & Elf – TotalFinaElf Sam, Feb 2000.
- Exxon & Mobil – ExxonMobil Corp, Nov 1999.
- El Paso & Sonat – El Paso Energy Corp, Oct 1999.
- Total & Fina – TotalFina, Jun 1999.

Lasmo & Monument – Lasmo Plc, Jun 1999.

- Santa Fe & Snyder – Santa Fe Snyder Corp, May 1999.

- Nisseki & Mitsubishi Oil Co. – Nisseki Mitsubishi Abushild, Apr 1999.

- Kerr McGee & Oryx – Kerr McGee Corp, Feb 1999.

- BP & Amoco – BP Amoco Plc, Jan 1999.

- British Borneo & Hardy – British Borneo Oil & Gas Plc, Oct 1998.

- Ocean Energy & Seagull – Ocean Energy Inc, Jun 1997.

Takeovers:

- Conoco - Gulf Indonesia Resources, July 2002

- CNOOC - YPFMaxus, Jan 2002.

- PetroChina - Devon Energy, Apr 2002

- Husky Oil Ltd. – Renaissance energy, Aug 2000.

- Canadian Natural Resources – Ranger Oil, Jul 2000.

- Fortune (Indo Pacific) – GFB Resources (Java) Ltd, Jul 2000.

- Agip – British Borneo, May 2000.

- Singapore Petroleum Company Ltd – LL&E Indonesia, Jan 2000.

- Maple/Matrix – GFB Resources (Langsa) Ltd, Jan 2000.

The Future

Pundits have been forecasting Indonesia's imminent shift from net oil exporter to net importer since at least the early 1970's. New discoveries and technological advances, such as enhanced oil recovery and deep-water exploitation, had postponed this transition to date. However, increasing consumption and a steady decline in production, coupled with lower exploration investment levels, means Indonesia is now likely to become

a net oil importer within the next few years.

To maintain its net exporter position, Indonesia should improve its fiscal terms for oil and gas production for both mature and frontier areas. In mature fields, the 85/15 (government/contractor) split for oil and 70/30 split for gas make thresholds higher than in other parts of the world. In frontier areas, where the split is 60/40 for gas and 65/35 for oil, the balance between risk and reward is generally viewed as insufficient to attract major exploration funds. These problems are exacerbated by small reserve accumulations and high infrastructure costs.

With substantial reserves of natural gas and coal, Indonesia could still remain a net oil exporter for a substantially longer period. To do so, however, the government has to implement legislation and policies that will rationalize use of Indonesia's energy resources. Energy policy reform will enhance efficient use of energy resources. Ideally, key measures would include:

- Proper incentives to encourage industry to expand the domestic use of natural gas and coal;
- Enhancement of Indonesia's new and existing production sharing contract (PSC) terms vis-à-vis other oil producing countries to make the PSCs more competitive;
- Improved GOI inter and intra ministry coordination to maximize efficiency and streamline new investment;
- Tax consolidation and improvement of the fiscal terms for oil and gas production; and

- Reinforcement of contract sanctity by honoring existing contracts, including LNG sales contracts, tax terms and refund VAT.

Issuance of implementing regulations for the 2001 Oil and Gas Law and 2002 Electricity Law will give Indonesia the opportunity to carry out some of the changes necessary to allow the country to rationalize its use of energy resources.

PSC Update

CHEVRON-TEXACO is the single largest crude oil producer in Indonesia, accounting for almost 50 percent of the country's total production. Its wholly owned subsidiary, Caltex Pacific Indonesia (CPI), averaged 577,000 bopd in 2002, dipping to an unofficial 507,000 bopd in 2003, through its central Sumatra PSCs (Rokan, Siak and MFK). CPI also holds a 100% interest in the central Sumatra Kisaran block, which it acquired from the government in 2001. CPI expects to conduct first exploration drilling at Kisaran during 2004. Chevron Texaco also has a 25% non-operating interest in the South Natuna Sea Block B, operated by ConocoPhillips.

The company's downstream activities include sales of paraxylene, benzene and fuel catalysts to refineries in Java, and the company enjoys a sizable domestic market share of lubricants and fuel additives. Through its affiliate Amoseas Indonesia, the company operates a geothermal plant in Darajat, West Java.

After a one-year extension, CPI handed over the operation of Coastal Plain Pekanbaru (CPP) oil block in August 2002 to the Indonesian government

through BP Migas. In return, BP Migas handed over the oil block to a consortium of state oil and gas firm Pertamina and Riau Province's company PT Bumi Siak Pusaka under a 50-50 share agreement. The hand over ended CPI's 20-year contract to manage and operate the block, which is located onshore Riau. CPP produced about 42,000 b/d of oil at the time of the turnover.

CPI is working to improve workforce and production efficiencies. For 2004, CPI plans to invest between \$200 and \$300 million to optimize development of its mature oil fields. The company also offered a Voluntary Resignation Program (VRP) to employees in December 2003. 1,133 Caltex employees chose to participate in the program.

EXXONMOBIL was created from the merger of Exxon and Mobil in November 1999, leading to the consolidation of Exxon, Esso, and Mobil operations in Indonesia. ExxonMobil celebrated 100 years of doing business in Indonesia in 1998, including 30 years as a production-sharing contractor, 20 years as a producer of liquefied natural gas and 10 years as a producer of liquefied petroleum gas.

One of ExxonMobil's largest endeavors during 2002-2003 was its effort to extend its TAC for the Cepu block in East Java. Through purchases and acquisitions, ExxonMobil holds and operates a 100% participating interest with the block under a production sharing arrangement awarded by Pertamina in 1990. ExxonMobil has invested over \$400 million in Cepu. EM has made a significant discovery at Banyu-Urip, with estimated resources in excess of 250 million barrels of oil and significant volumes of gas. The TAC expires in 2010

and ExxonMobil has proposed a 30-year extension and up to \$2.6 billion capital investment to fully develop the block. The company estimates Banyu-Urip peak crude oil production of 165,000 b/d. Major gas supplies could be available for sale to meet existing shortfalls in East and Central Java. It estimates the project would generate annual gross revenues between \$700 million and \$1.2 billion at peak production.

Cepu extension talks between ExxonMobil, Pertamina and the GOI have been ongoing for three years. Despite progress on the negotiations during the latter part of 2003, a final agreement has yet to be signed. Successful Cepu contract negotiations will provide a basis for substantial economic benefits to Indonesia and East Java, and will send a strong positive signal to foreign investors.

Also in Central/East Java, ExxonMobil owns a 68 percent participating interest in the Madura PSC. In 2003, ExxonMobil continued negotiations with PT Indonesia Power to provide 80-100 mmcf/d of gas from the Madura PSC to Indonesia Power's Grati 766-MW combined cycle power plant in East Java.

In North Sumatra, ExxonMobil's natural gas operations include the Arun, Pase, South Lhoksukon, and North Sumatra Offshore fields. ExxonMobil also has a 50-percent participating interest in A-Block (ConocoPhillips is operator). During 2002 and 2003, ExxonMobil's gas supply contracts to the AAF and PIM I fertilizer plants lapsed; however, the company did provide 2003 supplies based on 2003 sales agreements. Currently, ExxonMobil is providing a limited quantity of gas to the new PIM II

fertilizer plant. Due to declining gas production at Arun, the government may have to acquire 8-10 LNG cargoes from abroad in 2004 if it decides to maintain like-kind gas supply to fertilizer plants and still comply with its LNG contractual requirements.

UNOCAL leads in the exploration of Indonesia's deepwater resources, discovering about 1.9 billion barrels of oil equivalent to date. In 2002, the company produced 56,233 b/d of oil and condensate and a total of 149.3 BCF of gas. The company budgeted \$569 million in expenditures in 2002, including \$250 million for East Kalimantan, \$244 million for Makassar Strait, \$44.5 million for Rapak and \$30 million for the Ganal and Sesulu blocks.

The company, through subsidiaries, is the operator of the East Kalimantan (95% working interest), Ganal, Sesulu, Rapak (80% working interest each) and Makassar Strait (90 percent working interest) PSCs. In December 2002, Unocal acquired a 50 percent non-operating interest in the Muara Bakau PSC, offshore East Kalimantan. In January 2003, the company agreed to farm in the deepwater Donggala PSC, adjacent to the Rapak PSC, acquiring a 19.55 percent non-operating interest.

In August 2003, Unocal began production at Indonesia's first deepwater field at West Seno, offshore East Kalimantan. West Seno production is expected to peak at 60,000 bopd and 150 mmcf/d of gas when the second phase of the project is completed in 2005. The company also plans to develop the Sadewa gas field in 2005 (150-600 BCF). In the mid-term, Unocal hopes to begin production at Gehem in 2006 and Merah Besar and

Ranggas in 2007. Merah Besar alone could produce as much as 190,000 barrels of oil equivalent per day.

In 2004, Unocal will continue exploration and appraisal drillings to add to its oil and gas reserves. The company currently pipes about 150 mmcf/d to the Bontang LNG plant, however, the company predicts gas production could reach 800 mmcf/d or greater by 2011. Future gas production could be absorbed by a variety of sources – Bontang's planned ninth LNG production train, a proposed LNG regasification facility in Java (2006), and a proposed East Kalimantan-Java gas pipeline (2010).

BP is one of the largest foreign investors in Indonesia. Through partnerships with upstream authority BP Migas, BP has invested over \$6 billion in its Indonesian operations over the last 30 years. After acquiring Arco's assets in 2000, every BP business stream – exploration and production, chemicals, downstream and solar) is represented in the company's Indonesia operations.

In Java, BP currently supplies 65% and 50% of the West Java and East Java gas markets. BP is the operator of the Offshore North West Java PSC (46%), which averaged 37,000 b/d of crude oil and 315 mmbtu/d of gas during 2002. In December 2003, BP and state electricity utility PLN signed a new Gas Sales and Purchase Agreement (GSPA) to supply up to 265 mmcf/d of natural gas to the Muara Karang and Tanjung Priok power plants until 2017.

BP is 100% operator of the Kangean PSC, whose Pangerungan gas field supplies the majority of East Java's domestic gas. Due to declining gas

production at Pangerungan, BP waived the preferential gas rights it had enjoyed since 1980. Gas supply interruptions due to a pipeline leak in January 2003 reduced the field's average gas supply from 180 mmcf/d to 100 mmcf/d, affecting industrial users. During 2003, BP has been in talks with the government over a 20-year extension of the Kangean PSC (which expires in 2010) to develop the Terang Sirasun gas field and boost production.

BP is the major shareholder and operator of the Tangguh LNG project, which encompasses three PSCs in the Berau-Bintuni Bay region of western Papua. The Tangguh gas fields contain 14.4 trillion cubic feet (TCF) of proven and certified natural gas reserves. The planned LNG processing plant will produce seven million tons of LNG per year from two initial processing trains.

The Indonesian government and BP have obtained market commitments for 7.65 million tons (MT) of Tangguh LNG per annum -- 2.6 MT of LNG per year to China's Fujian province for a 25 year term beginning 2007, 1.35 MT of LNG per year to South Korea's K Power and POSCO for a 20-year term beginning 2005, and 3.7 MT of LNG per year to the U.S. West Coast for a 20-year term beginning in 2007 (until Tangguh becomes operational LNG will likely come from the Bontang LNG facility in East Kalimantan). The GOI and BP also hope to ink new LNG supply contracts with Japan. The company's final decision on the project is not expected until sometime in 2004, making it unlikely that LNG production would begin until 2008.

BP is also considering a partnership with PLN to build an LNG regasification terminal in West Java. The terminal is

one of the options the government is considering to meet the growing domestic gas needs of West Java. The proposed project would cost between \$320 - \$380 million and supply West Java power plants with 500 mmcf of gas from BP's Tangguh LNG plant.

CONOCOPHILLIPS continues to streamline and refocus its Indonesian operations following the August 2002 merger of Conoco Inc. and Phillips Petroleum. The merger followed then-Conoco Inc.'s acquisition of Gulf Canada Resources in 2001.

During 2003, subsidiary Conoco Phillips Indonesia announced plans to change its investment criteria and focus on three core areas in Indonesia: South Sumatra, South Natuna Sea and East Java. In mid-2003, the company offered for sale its interest in five oil and gas blocks: Sebuku PSC south Makassar Strait (100 percent working interest); Kakap PSC offshore Natuna (31.25 percent operating interest); Block A PSC onshore Aceh (50 percent operating interest); Tungkal PSC south Sumatra (100 percent working interest); and South Jambi B PSC Sumatra (45 percent operating interest). In the second half of 2003, Conoco Phillips sold three of the offered blocks, Kakap PSC to local firm Star Energy, and Sebuku PSC and Tungkal PSC to Singapore-based Pearl Holdings Ltd. In October 2002, Pearl Holdings had acquired joint-operatorship and 30 percent working interest in the South Sumatra Jambi EOR from ConocoPhillips subsidiary Gulf Resources.

In August 2003, ConocoPhillips began supplying natural gas from its south Sumatra Corridor PSC to Singapore's

PowerGas, via the newly commissioned Grissik-Batam-Singapore gas pipeline. The company already supplies natural gas to Singapore's Sembawang Gas from its West Natuna gas fields (since 2001) and to Petronas' Duyong Complex offshore Malaysia from South Natuna Sea Block B (since August 2002). ConocoPhillips has been a major player in the pipeline gas business since 1998, when it began supplying gas from the South Sumatra Corridor Block PSC to the ChevronTexaco-operated Duri steamflood in central Sumatra.

The Belanak floating production, storage and offloading (FPSO) project at the South Natuna Sea Block B PSC, offshore West Natuna, is currently under development. The FPSO is slated to produce 100,000 boepd and process up to 400 mmcf of natural gas to meet the company's commitments to Singaporean and Malaysian customers. Belanak should be completed by mid-2005.

In offshore East Java, ConocoPhillips has an operating interest in the Ketapang block. The company believes the block has significant oil potential and began appraisal drilling in late 2003. Malaysia's Petronas has an equal, non-operating interest in the block.

ConocoPhillips is also a major player in the \$900 million South Sumatra to West Java gas development project. The project includes a 660-kilometer pipeline from ConocoPhillips Suban gas field in the Corridor Block to state-owned electricity utility PLN gas-fired power plants in West Java. In July 2003, the company signed a Heads of Agreement with PLN to supply 2.3 TCF of gas to the power plants beginning in 2006. It expects to sign final gas transportation

and gas supply agreements with PGN and PLN in early 2004.

AMERADA HESS consolidated its holdings in Indonesia during 2002-2003. In October 2002, the company farmed out its 70 percent working interest and operatorship in the Lematang PSC in Sumatra to Medco Energi. That year, Amerada Hess also transferred its 25 percent interest in UK-based Premier Oil in exchange for Premier's 23 percent interest in the Natuna Sea Block A PSC.

In April 2003, the company sold its 30 percent interest in its main producing asset, the Jabung PSC onshore Sumatra, to a consortium led by PetroChina International. This accounted for the company's drop in oil production from 4000 b/d in 2002 to 1000 b/d in 2003. Amerada Hess' present assets in Indonesia are the Pangkah Block in East Java (66%, operator), the Jambi-Merang block onshore South Sumatra (25%), the offshore West Natuna Block A (23%), and the Tanjung Aru block in the Makassar Strait (50%, operator).

During 2002-2003, Amerada Hess was involved in gas sales negotiations to supply gas from the Ujung Pangkah field to state-owned PLN power plant Gresik in East Java. In December 2002, the company signed an agreement to supply about 50 mmcf/d to Gresik. PLN would like Amerada Hess to supply an additional 100 mmcf/d to the plant, but the agreement may fail over PLN's inability to provide a standby letter of credit worth \$120 million. In July 2003, the company signed an MOU with the PT Petrokimia petrochemical plant in Gresik to supply 30-60 mmcf/d beginning 2005.

MEDCO, Indonesia's largest private oil company, began exporting crude oil in 2000 and formally changed its name to "PT Medco Energi Internasional Tbk." Medco is 85.5 percent owned by Mauritius-based New Links Energy Resources. New Links is 41 percent owned by Indonesia's Panigoro family, with another 41 percent by Thailand's PTT Exploration and Production and 19.9 percent by Credit Suisse First Boston. Public investors' stake in the Jakarta Stock Exchange-listed energy company is 5.24 percent. Medco, through its PT Exspan subsidiary, owns 14 oil and gas blocks throughout Indonesia. Of the 14 blocks, 7 are in production, while the rest are in the exploration phase.

Medco is the third-largest crude oil producer in Indonesia. As a result of acquisitions in 2001, crude oil production jumped to over 85,000 bopd in 2002. However, Medco reported that oil production dropped 17 percent to 70,200 bopd in 2003. Lower production in Medco's largest fields, Semoga and Kaji, in south Sumatra, are the primary reason for the production decline, which will continue into 2004. Medco's proven oil reserves now stand at 147 million barrels, while proven and probable reserves stand at 264 million barrels.

The company believes its future lies in natural gas development. Medco's gas reserves stand at 126 BCF proven, and 2.9 TCF proven and probable. Medco's gas production, estimated at 82 mmcf/d during 2003, is small in comparison to other companies, but growing. In addition to gas blocks in south Sumatra, Medco's Exspan Tomori Sulawesi holds a 50 percent operating stake in the Senoro-Toili JOB with PT Pertamina. The block has estimated natural gas reserves of 2.5 –

4 TCF. In August 2003, Exspan and Pertamina signed a MOU with U.S. company Marathon Oil Corporation. Under the terms of the MOU, Exspan and Pertamina would provide up to 6 MT of LNG per annum to Marathon's proposed Tijuana Regional Energy Center in Baja California, Mexico.

Medco's strategy for 2004 is to acquire producing oil and gas blocks that still have an upside exploration potential. The company plans to increase capital expenditures by 85 percent in 2004, to \$435 million, and operational expenditures by 70 percent to \$445 million. Medco revealed a significant element of its expansion plan in December 2003, when it launched a surprise takeover bid for Australian energy firm Novus. Novus holds non-operating interests in the East Java Brantas PSC (50 percent) and West Natuna Kakap PSC (25 percent). Both are producing gas blocks.

CNOOC, the China National Offshore Oil Company, became Indonesia's largest offshore oil producer (over 110,000 bopd) following its acquisition of RepsolYPF Indonesia in January 2002. CNOOC's holdings now include an operating 65.34% interest in the Offshore South East Sumatra PSC, a 36.72 percent interest in the Offshore Northwest Java PSC, a 25 percent interest in the West Madura PSC offshore East Java, a 50 percent interest in the Poleng TAC in East Java, and a 39.51 percent interest in the Malacca Strait PSC.

CNOOC's Indonesia strategy is to tap into the export market as well as get more involved in the domestic energy (i.e., natural gas) industry. CNOOC entered the LNG export business when it bought

a 12.5 percent stake in the \$3 billion Tangguh LNG project in late 2002. CNOOC hopes to increase its stake in the Papua-based potential LNG center even further. The company is seeking to block British Gas Group's plan to sell its 50 percent stake in the Muturi PSC (10.73 percent of the total project) to Japan's Mitsui. Both CNOOC and LNG Japan Corporation would like to buy all or part of BG Group's Tangguh share.

The company also laid the groundwork for possible participation in domestic energy development when it signed an MOU with national gas company PGN in September 2002. CNOOC agreed to participate in a proposed PGN gas pipeline project linking the gas-rich province of Kalimantan to Java. The ambitious \$1.7 billion project is under consideration, though there is potential competition from a proposed Java LNG receiving terminal to provide natural gas to the Java market.

During 2003, CNOOC held discussions with upstream authority BP Migas over whether the company could build a 90-km pipeline from its Pabelokan gas field (South East Sumatra PSC) in offshore West Java to planned gas-fired power plant at Cilegon in Banten. PGN is proposing that it build the pipeline and charge a toll fee for CNOOC to supply 120 mmcf/d to PLN Banten in 2006.

PETROCHINA operates six oil and gas blocks in Indonesia, the result of its April 2002 acquisition of Devon Energy. Four blocks are producing, while the remaining two are in exploration. The company operates the Jabung Block PSC onshore Jambi, Sumatra, which produces approximately 30,000 barrels of oil equivalent (boe) per year. PetroChina's

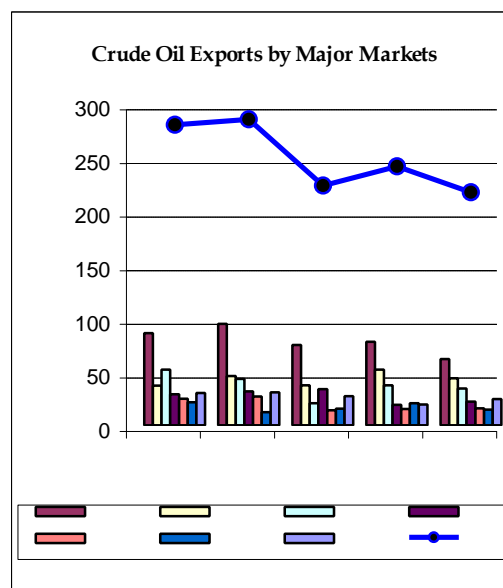
gas production received a boost in August 2003 with the opening of the South Sumatra-Batam-Singapore gas pipeline, which receives gas from the Jabung PSC.

Marketing the Crude

Indonesia, through Pertamina, BP Migas and its foreign partners, sells crude oil using the Indonesia Crude Price (ICP) formula. Indonesian crude is generally low sulfur and waxy. Indonesia's representative Minas crude (in crude marketing terms, referred to as Sumatra Light Crude) produced in Central Sumatra has an American Petroleum Institute (API) gravity of 34.5 degrees at 60°F and a sulfur content of between 0.06 percent and 0.10 percent by weight.

Effective October 1, 1999, Pertamina changed the pricing formula (ICP) for official export prices of Indonesian crudes. The ICP formula has three components: the Asian Petroleum Price Index (APPI), Rim Intelligence Company, and Platts. The APPI component is derived from twice weekly APPI price assessments adjusted by a basket of regionally traded crude oils (including Indonesian Sumatra Light Crude and Malaysian Tapis) using a 52-week moving average. Pertamina lowered the portion of the APPI panel quotes from 33.3 percent to 20.0 percent and increased the portion of spot assessments of Platt and RIM to 40.0 percent each. The purpose of the adjustment was to better reflect prices in the world market by putting more emphasis on the spot market. The Ministry of Energy and Mineral Resources reviews the oil pricing formula semi-annually.

Asian countries are the largest markets for Indonesian crude. Japan accounted for 28.4 percent of Indonesian crude oil exports in 2002, followed by South Korea (20.2 percent), Australia (15.9 percent), China (10.2 percent), the United States (7.3 percent), and Singapore (6.7 percent).



In 2001, Pertamina opened an office in Singapore through its wholly owned Hong Kong-based subsidiary Pertamina Energy Trading (ex-Perta Oil). The new office promotes and facilitates trade in crude oil and fuel between Singapore and Indonesia, offers logistical services to Pertamina, and represents Pertamina's interests.

Imports

Indonesia remains a significant importer of crude oil. In 2002, Indonesia imported 124.1 million barrels (an average of 340.1 thousand b/d), mainly from Nigeria (34.6 percent), Saudi Arabia (32 percent), China (6.3 %), Malaysia (5.6 percent), Vietnam (3.3 percent) and Iraq (3.1%). Oil product imports rose to 107 million barrels from 90 million barrels in 2001.

PETROLEUM PRODUCT CONSUMPTION AND REFINING

Overview

Based on the petroleum products supply and demand trends in 2002, Indonesia is moving toward eventual net importer status, although product surplus still averaged 52 million barrels annually, or 142,000 b/d. Fuel consumption increased 3.4 percent in 2002 to 57.8 million kiloliters (KL), up from 55.9 million KL in 2001 and 54.8 million KL in 2000. Except kerosene and industrial diesel oil, consumption increased in each category of fuel, with the strong likelihood that a significant part of the increase resulted from smuggling of Indonesian fuel products to neighboring countries. In 2002, fuel product imports increased to 293,000 b/d.

The majority of domestic consumption is for transportation (47 percent), industry (21.3 percent), household use (20.1 percent) and electric power (11.3 percent). The transportation sector uses largely automotive diesel oil (ADO), while households are the largest consumers of kerosene.

Pertamina's Downstream Directorate is responsible for the distribution of fuel products to end-users from 166 storage depots throughout Indonesia. The Directorate has established eight regional representative offices to market the products. Fuel products are transported via an elaborate pipeline network and by tank trucks, rail tank wagons, tank vessels and barges. Pertamina controls the sale of gasoline and automotive diesel by direct ownership and franchise of close to 3,000 gasoline stations nationwide. Pertamina itself only owns 2% of the retail stations. The private

sector also sells kerosene. The selling price of fuel oil on the domestic market is determined by the government, which applies a uniform tariff for each type of fuel throughout Indonesia.

Domestic Fuel Consumption

(Million Liters)			
Products	2000	2001	2002
ADO	21,734.7	23,013.7	24,212.9
Gasoline	12,421.8	13,056.7	13,732.4
Kerosene	12,455.2	12,227.9	11,678.4
Fuel Oil	6,013.1	6,121.0	6,260.3
IDO	1,451.2	1,420.0	1,360.3
Avtur	744.1	N/A	552.9
Avgas	4.6	N/A	-
Total	54,824.7	55,890.9	57,797.3

Oil Refining

In 2002, Indonesia's production of petroleum-based fuels and non-fuels from domestic refineries rose to 1 million b/d, largely due to increased fuel production. Most of the petroleum products refined in Indonesia are destined for domestic consumption. Indonesia has nine oil refineries, all owned and operated by state oil and gas company Pertamina, with a combined installed capacity of 1.06 million b/d. The nine refineries are located in Sumatra, Java, East Kalimantan and Irian Jaya. They produce a mix of oil fuels (diesel, fuel oil and kerosene), liquefied natural gas, secondary fuels (such as naptha) and non-fuels (such as asphalt and lubricants).

According to government figures, Pertamina's refineries operate at 99% of their combined capacity of 1.057 million b/d. Some industry watchers report that number may be closer to 85-90%. Nevertheless, the lack of spare capacity means that Indonesia must seek overseas

crude processing deals when its larger refineries are closed for maintenance. This occurred between August – October 2003, when Pertamina paid the Singapore Petroleum Company to process Indonesian crude when the Balongan refinery closed for maintenance.

Oil Refinery Production (1000b/d)

Refinery	Installed Capacity	Crude Processed 2002
Pangkalan Brandan	5.0	2.7
Dumai	120.0	119.7
Sungai Pakning	50.0	49.1
Musi	135.2	121.2
Cilacap	348.0	318.0
Balikpapan	260.0	260.5
Balongan	125.0	122.6
Kasim	10.0	6.0
Cepu	3.8	2.5
TOTAL	1,057.0	1,002.4

Source: MIGAS

Pertamina foresees requiring the refineries to buy crude oil at market prices and also to sell fuel products to the government at market prices. Oil and Gas Law 22/2001, once fully implemented, will permit foreign investors to produce, import and distribute oil-based lubricants and thus end Pertamina's monopoly.

Refinery Projects

Pangkalan Brandan: this small, aging refinery consists of a simple (primary) distillation unit, with no secondary processing unit. Its products are premium fuels, diesel, LSWR and asphalt. Pangkalan has a processing capacity of 5,000 b/d.

Dumai: The refinery has both a primary and a secondary processing unit (Hydro Cracker), which can produce up LPG,

naphtha, HVGO and green coke. Its processing capacity is 120,000 b/d.

Sungai Pakning: Built around 1957, the plant refines heavy paraffin crude oil to produce diesel and paraffin, with a capacity of 50,000 Bb/d.

Plaju: The aged refinery was built by Shell in 1930. It consists of both a primary unit and a secondary processing unit. The secondary unit (Fuel Catalytic Cracker Unit) can process up to 135,000 b/d was designed to produce PTA and Polyam. In August 2003, operating problems at Plaju closed the refinery for one month, delaying maintenance on the Balongan refinery. Pertamina has proposed converting the facility into a petrochemical plant by 2008.

Cilacap

Pertamina extended a term purchase contract with Saudi Aramco to buy about 120,000 b/d of Arabian Light crude for processing at the sour train of its 348,000 b/d Cilacap refinery. The agreement is valid over the period July 1, 2001, to June 30, 2002. Pertamina first signed the term purchase contract in 1998, making this the third renewal of the annual contract. Over this period, Pertamina has also continued examining the relatively cheaper option of purchasing Iranian Light or Iraq's Basrah Light for processing at Cilacap's 118,000 b/d CDU. Its secondary processing unit is nearly the same as that of Plaju that is of FCCU type. The difference is the product which was designed more to produce lube base.

Balikpapan II:

The Balikpapan II refinery in East Kalimantan is more modern than Cilacap

and Dumai, and consists of both a primary unit and a secondary processing (Hydro Cracker) unit. The plant has a refining capacity of 220,000 b/d and can produce up to wax. Bechtel upgraded the refinery in 1983. Unfortunately, due to the facility design, the plant cannot process crude from co-located crude oil producers in Indonesia (Total, Unocal, Talisman, and VICO). The refinery only processes imported crude oil.

Balongan

Indonesia's newest state-owned refinery at Balongan in West Java has the capacity to process 125,000 b/d of domestic crude. It has two production units: the crude distillation unit (CDU) and the residue catalytic cracking unit (RCCU). The CDU processes crude oil into naphtha, kerosene, automotive diesel and residue; the RCCU turns the residue from CDU into LPG and Premium, Super TT and Premix gasoline. The RCCU, one of the world's largest, has processing capacity of 83,000 B/D, but has experienced problems since its commissioning in 1994. The refinery was initially designed to supply export markets, which is why it is also called the Exor (export oriented) I refinery. Balongan supplies about 70% of Jakarta's refined product demand. The plant processes Duri crude (70%), Minas crude (20%) and Jatibarang crude (10%). Pertamina closed the plant for routine maintenance during September-October 2003. However, a crude pipeline leak required Pertamina to run the refinery at 80% capacity for another month.

Kasim

This is a small, mini-refinery has only a simple distillation (primary) unit.

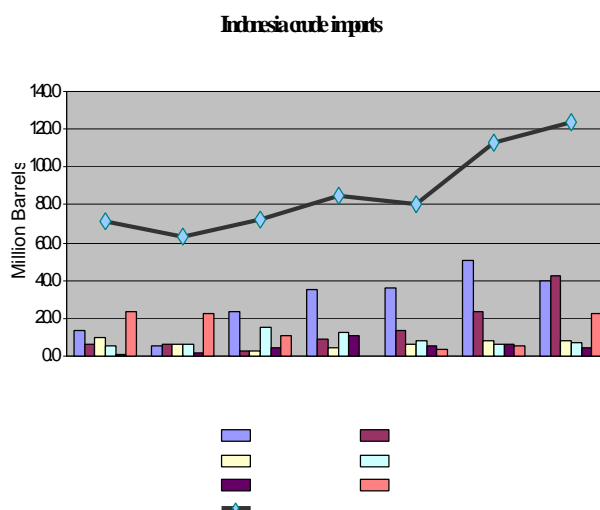
New Refinery Projects?

In December 2003, Pertamina indicated it was in talks with Japan's Mitsui and Mitsubishi Corporations to build a new refinery in East Java to serve that province's large market. Pertamina said Indonesia needs to build a new oil refinery with a capacity of at least 200,000 b/d in order to reduce the country's dependency on imported oil products. Earlier in the year, Pertamina said it hoped to locate the new refinery at the TPPI petrochemical complex compound in Tuban, East Java, to reduce construction costs.

Fuel Imports

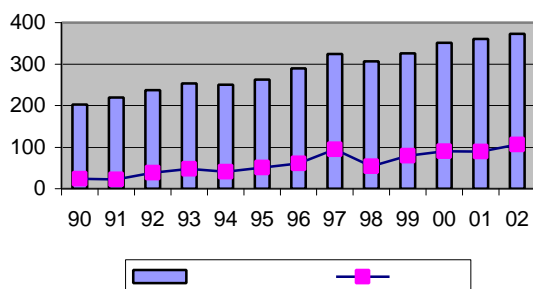
Indonesia remained a net exporter of crude oil and products in 2002, although industry analysts predict that absent new major discoveries of oil, Indonesia will soon become a net importer. Although the gross output of Indonesia's nine refineries is greater than domestic consumption, refined fuel products and crude oil for blending must still be imported.

In 2002, fuel product imports increased



19.2 percent to 293,000 b/d from 2001's 247,000 b/d. The largest import product category was automotive diesel oil (56.7 percent) followed by High Octane Mogas Component (16 percent) and kerosene (19.1 percent).

**Domestic Sales and Imports of Fuel Products
(In Million Barrels)**



Pertamina has adopted a four-pronged approach to source adequate supplies of fuel for Indonesia's domestic market:

- Production from Pertamina refineries;
- Time-limited contracts for fuel imports from the Middle East;
- Spot product purchases from Singapore; and
- overseas crude processing deals (CPD).

Pricing and Subsidies

The government continues to administer petroleum product prices, which remain a matter of great sensitivity in Indonesia. Presidential Decree No.9/2002 on adjusting domestic fuel prices is part of an overall strategy to completely eliminate all fuel subsidies except for kerosene by 2004, as stipulated by Law 25/2000. The decree aims to:

- improve subsidy distribution

throughout all socioeconomic classes;

- reduce fuel smuggling caused by the significant difference between domestic and international fuel prices; and
- promote efficient use of fossil fuels and encourage alternative energy source development.

Over the last two years, the Government has significantly reduced the fuel subsidy by increasing fuel prices. The subsidy dropped from Rp 68.4 trillion in 2001 to Rp 30.4 trillion in 2002. The government planned to continue significant reductions in 2003, budgeting only Rp 13.2 trillion to cover the kerosene subsidy. However, wide scale public protests over an average 20 percent fuel price hike in January 2003 caused the government to reverse the large price increases for automotive diesel oil (ADO), industrial diesel oil (IDO) and industrial kerosene. This, coupled with international oil prices higher than the \$22/barrel budget assumption raised the actual 2003 fuel subsidy to Rp 30 trillion, according to the Ministry of Finance.

**Fuel Prices Increases, 2002-2003
(in Rupiah)**

Fuel Type	2001	2002	%Chg	2003	%Chg
Gasoline	1450	1750	20.7	1810	3.4
Kerosene	400	600	50.0	700	16.7
ADO	900	1550	72.2	1650	6.5
IDO	920	1510	64.1	1650	9.3
Fuel Oil	670	1120	67.1	1560	39.3

In 2004, the Government plans to allocate Rp 14.5 trillion in fuel subsidies, based on budget assumptions of a \$22/barrel oil price and fuel consumption at 60 million kiloliters. However, in October 2003, Energy Minister Purnomo suggested that the government continue fuel subsidies on certain fuel products through 2004. Citing the sharp public response to the January

2003 price hikes, as well as the coming election year, Purnomo suggested that Law 25/2000 be revised.

In 2002, the Government announced a new pricing formula pegged to world market prices. Pertamina announced a new price list at the beginning of each month. The new formula allowed fuel prices to be fluctuated every month based on the Mid Oil Platt Singapore (MOPS) prices, but within a government-set band in order to protect against extreme fluctuations in world prices. From March – December 2002, the government set the price index at MOPS plus 5 percent.

In January 2003, the Government temporarily stopped linking domestic fuel prices to MOPS after world crude prices soared above \$30/barrel over the impending conflict in Iraq. Fuel prices were again linked to MOPS in May 2003, after world crude prices fell below \$25/barrel.

Unleaded Gasoline Phase-in

The government program to switch to unleaded gasoline (ULG) nationwide showed some progress in 2003, but its completion target has been delayed to 2005. As a result, Pertamina is out of compliance with the Energy Ministry's Decree No.1585/1999 mandating nationwide unleaded gasoline by January 2003. ULG is currently supplied to the greater Jakarta area (July 2001), Cirebon in West Java (October 2001), Bali (November 2002) and Batam (June 2003).

In 2003, Indonesia overcame the financial difficulties that had delayed the upgrading of refineries to provide adequate unleaded gasoline supply. The Energy Ministry obtained a \$200 million

loan from a syndicate of international banks, while Pertamina has allocated \$75 million of its own funds. The funds are being used to increase unleaded fuel production at the Balongan and Cilacap refineries. Construction is underway – the refinery upgrades should be complete by the end of 2005.

During 2003, the government reduced lead levels in the other parts of the country. The Ministry of Finance asked Pertamina to reduce lead content of gasoline to 0.3 grams/liter (g/l) from 0.5 g/l, since the lower level provides sufficient octane. To independently verify progress in the lead phase-out program, a joint Committee for Leaded Gasoline Phase-Out tested lead and octane levels in gasoline in various cities throughout Java, Bali and Batam in January 2004, with support from the U.S.-Asia Environment Partnership under USAID. The findings show that lead levels fall within the range of 0.18 g/l to 0.28 g/l, consistent with the Ministry of Finance directive.

Downstream Market Liberalization

Beginning in 1997, the GOI has moved slowly but surely to encourage greater capacity and efficiency in the downstream sector. In the early 1990's, the GOI determined that Pertamina did not have the funds to build additional refining capacity and undertook a series of measures to attract private investment in the refining sector. Under Presidential Decree (PD) No. 31/1997, the GOI loosened Pertamina's hold on refining by allowing private refineries to market their products domestically through Pertamina.

Highlights of PD 31:

- Private refineries could be set up by Indonesian companies in partnership with foreign firms or with Pertamina;
- Pertamina would buy oil fuels and other refinery products from private companies on a long-term trade contract basis in line with Pertamina's needs and absorption capability and considering the economics of the private corporation's refinery products;
- Pertamina's buying price for fuel from private refineries would be based on the international market price;
- Oil products produced by private refineries which were not needed by Pertamina could be sold by the private companies on the international markets;
- Pertamina would remain the sole distributor of domestic market fuel.

Private refineries may market domestically products, such as lubricants, not otherwise prohibited by Pertamina.

Further Reforms

Oil and Gas Law 22/2001 marked another step toward liberalizing the downstream sector. The Law generally envisions a downstream sector which:

- Eliminates Pertamina's monopoly position by November 2005;
- Ensures that investors and participants are given equal regulatory and legal treatment;
- Establishes a transparent pricing regime based on market prices;
- Rationalizes and streamlines downstream administration;
- Allows local and private investors to enter the downstream sector in four areas: processing, transportation, storage and marketing.

While Law 22/2001 sets general guidance on changes to the downstream sector, the GOI has yet to issue implementing regulations that will provide potential local and foreign players a clear picture of the costs and benefits of downstream participation. In late 2003, the GOI provided investors a look at key points in the draft regulation, including:

- The Minister of Energy and Mineral Resources holds the right to issue various licenses for downstream business entities;
- Downstream authority BPH Migas regulates the provision, distribution and transportation of oil and gas by companies that have obtained required licenses;
- Downstream activities include the processing of crude oil and gas into oil fuel and gas fuel, LPG and LNG; the transport of processed oil/gas products via pipeline and otherwise; the storage of such products; and the sale, purchase, export and import of such products.
- The processing of gas into petrochemical products will be a downstream operation, jointly regulated by the Energy Ministry and other related ministries.
- BPH Migas will determine "special rights" for gas pipeline operators as well as tariffs for other pipeline users.

- The government sets policy on the national Strategic Fuel Reserve, and can obligate downstream license holders to contribute to the reserve. The government determines the size of each company's contribution.

- The government will gradually let the market determine prices of gasoline, diesel and kerosene. However, the government will determine which areas are ready for competition, and continues to set prices for areas considered not yet prepared for free market competition.

- There will be two types of fuel trading licenses: wholesale and limited trading. Wholesale licenses are for companies that intend large-scale sale/import/export of processed oil and gas products and have their own storage facilities. Limited trading licenses are for similar companies that do not have storage facilities.

- Wholesale license holders can distribute their commodities to end users, while limited trading license holders can only sell their commodities to users with storage facilities or receiving terminals.

The impending downstream liberalization has sparked debate within the industry. Some observers claim fuel processing (and prices) would be more efficient and less costly if state-owned Pertamina were allowed to retain its rights over processing and distribution. However, others assert that new players must be afforded access to existing terminals and pipelines in order to invest and create competition. This "open access" policy would be the only feasible way to eliminate barriers created by Pertamina's decades-long monopoly over the sector.

Foreign investors are eyeing the downstream market, but waiting to see the final implementing regulations. Chevron Texaco, BP, PetroChina and Petronas have all publicly expressed interest in downstream investment. In November 2003, Petronas and Pertamina signed an MOU to jointly develop a fuel distribution system in East Java. Under the agreement, both parties would build two main fuel terminals and one 134-km pipeline system linking Tuban and Surabaya. The system could be completed as early as 2007.

Lube Oil

Pertamina has not been able to prevent smuggling of lower-priced imported lubricants, despite its monopoly on lubricant supply, leading to a glut in the market. In addition, according to Pertamina, Kuwait investors plan to build a 125,000 b/d refinery plant in Gresik, East Java, but they have yet to begin.

Pertamina is the only sanctioned importer of lubricants with greater than 70% mineral oil content. General importers may bring in products classified as "synthetics" or hydrocracked base stocks that do not meet this mineral oil threshold. Indonesian lubricant plants are permitted to operate legally only in the recycling of lubricants. Pertamina itself operates 3 lube oil blending plants, located in Jakarta, Cilacap and Surabaya, with a combined capacity of 413,030 liters.

Production capacity of lube oil

Kiloliter/Year		
	Company	Capacity
1	Pertamina	413,040
2	Dirga Buana Sarana	1,701
3	Wiraswasra Gemilang	75,000
4	Agip Lubrindo Pratama	6,000
5	Castrol Indonesia	86,000
	Total	582,601

NATURAL GAS

Indonesia's natural gas industry is changing, affected by more competitive LNG markets, new pipeline exports, and increasing domestic gas demand. Rising power demands, fuel subsidy removals, and gas incentives in the 2001 Oil and Gas Law will drive increased use of gas domestically. Infrastructure limitations, financing issues, and regulatory uncertainty constrain gas development, however. Overcoming these constraints is necessary in order to balance Indonesia's gas use, lower the cost of domestic energy, and maintain a stable power supply. Indonesia's overall investment climate will determine the pace of future development.

Indonesia has between 170 and 180 trillion cubic feet (TCF) of natural gas reserves (proven and probable), the twelfth largest in the world. In 2002, the country produced 3.04 trillion cubic feet (TCF) of gas, number six in world gas production. Gas reserves are equivalent to three times Indonesia's oil reserves and can supply the country for 50 years at current production rates. According to the GOI, over 71 percent of natural gas reserves are located offshore, with the largest reserves found off Natuna Island (34.4 percent), East Kalimantan (30.2 percent), Irian Jaya (15.1 percent), Aceh (6.8 percent) and South Sumatra (6.4 percent). However, not all of these reserves are commercially viable, due to both the quality of the gas as well as its distance to market.

Indonesia currently supplies 26 percent of the world's LNG. LNG accounts for 54 percent of the country's total natural gas production and is exported to Japan, South Korea and Taiwan. Pipeline gas exports to Singapore began in 2001,

reaching 82 BCF last year, with a new Sumatra-Singapore pipeline inaugurated in late 2003. Revenues from gas exports are substantial -- \$5.6 billion in 2002, or about 10 percent of Indonesia's total export revenues. Domestically, gas demand comes primarily from fertilizer and petrochemical plants (34 percent) and the power industry (25 percent). Most of Indonesia's gas comes from East Kalimantan (33 TCF in reserves) and Sumatra (29 TCF in reserves), but there are large uncommitted reserves in Papua (18 TCF) and other areas in the archipelago (46 TCF). The industry is dominated by six major companies, which account for 90 percent of all production.

**Gross Natural Gas Production by
Major Producers (MMSCF)**

Producers	2000	2001	2002	% Change
Total Ind.	841,419	880,237	835,031	-5.1
Exxon	458,929	268,109	557,873	108.1
Vico	452,456	464,049	438,982	-5.4
BP	293,034	294,972	272,113	-7.7
Pertamina	285,692	276,791	258,012	-6.8
Gulf Res.	165,226	163,751	162,638	-0.7
Unocal	166,316	159,313	149,317	-6.3
Others	238,230	299,928	367,877	25.9
Total	2,901,302	2,807,150	3,041,87	8.4

Roughly 55 percent of Indonesia's natural gas was marketed as LNG or liquefied petroleum gas (LPG) for export, 7.7 percent for electricity, 7.4 percent for fertilizer and 2.2 percent for city gas. Less than six percent was flared.

The nature of Indonesia's gas industry is changing, however. New LNG producers in Qatar, Australia, Russia, along with Malaysia, now challenge Indonesia's leadership in the LNG market. At the same time, a regional gas transmission network is developing, creating new gas markets and sources of revenue.

Domestically, the reduction of fuel subsidies ease fuel price distortions, making natural gas more competitive as a fuel alternative. Gas should also play a significant role in meeting the country's growing power demands. Finally, the Oil and Gas Law of 2001 has streamlined the process for domestic gas supply sales and created a new domestic market obligation (DMO) for gas. These changes create new opportunities in the domestic gas market, even as the global LNG market becomes more diversified.

Pipeline exports of natural gas have offset in part the greater competition in LNG markets. In 2001, Indonesia began exporting 325 mmcf/d to Singapore via subsea pipeline from West Natuna under a 22-year contract. Deliveries of natural gas to Malaysia's Duyong gas platform began in August 2002, under a 20-year contract for 250 million cubic feet per day (mmcf/d). Gas sale revenues will likely total \$14.2 billion over the life of both contracts. In August 2003, the South Sumatra-Singapore gas pipeline was completed; it will eventually supply 350 mmcf/d over a 20-year contract. Pipeline gas exports increased nearly 160 percent between 2001 and 2002, reaching 82 BCF and accounting for 5 percent of gas export volume.

Lower Subsidies, New Laws Stimulate Domestic Demand

Given the increasingly competitive LNG market, both government and industry recognize the need to develop Indonesia's potentially large domestic gas market. Indonesia's low utilization (compared with other developing countries), in part is due to reserves being located far from the demand centers in Java and Bali and the limited infrastructure. However, fuel

subsidy reductions and legislative changes should stimulate domestic gas demand. The GOI slashed fuel subsidies from \$7.6 billion in 2001 to a projected \$1.6 billion in 2003, a 78 percent reduction. (Note: this reduction is probably closer to 70 percent, following a partial rollback on fuel price hikes in January 2003). According to Pertamina's published fuel prices, this makes natural gas, at \$2.50-\$3.00/mmbtu, much more attractive than fuel oil (\$4.85/mmbtu) and diesel (\$5.53/mmbtu).

The Oil and Gas Law of 2001 introduced other changes that will encourage domestic gas use. The new law permits direct "free market" negotiations of gas contracts between buyer and seller, endorsed by the government. In the past, production sharing contractors (PSCs) had to sell their gas to the state-owned petroleum company, Pertamina, which in turn sold the gas to the final buyer. Several PSCs report that the GOI's new direct negotiation mechanism is working well and that upstream authority BP Migas has generally stayed out of the negotiations, except in cases where either the buyer or seller requested its participation.

Growing Power Needs Will Drive Gas Demand

Power generation needs in Java and Bali will also spur growing domestic gas demand. Over the last several years, peak power demand grew by an average of eight percent annually, while power capacity did not increase. As a result, the actual reserve margin has declined from 16 percent in 2001 to a razor-thin 6 percent in 2003 (Note: desired reserve margins are normally between 25 and 30 percent). According to a Cambridge

Energy Research Associates (CERA) study, Indonesia needs over 10,000 megawatts of new capacity between 2008 and 2015 in order to prevent a long-term power crisis. Much of that new capacity will be fueled by gas. PLN plans to raise natural gas use by the power sector from 21 percent in 2002 to 40 percent by 2015. By volume, this means an increase from 450 mmcf/d last year to 1.7 billion cubic feet per day (bcfd) in 2015.

Increasing gas consumption in the energy mix makes strong economic sense. About 2700 MW of PLN's gas turbine combined cycle (GTCC) plants in Java are running on fuel oil because of declining gas supply and transmission problems in East Java. Petroleum fuels are expensive – about 6.2 cents per kilowatt hour (kWh), or 2.5 times more costly than gas. PLN spends about \$1.7 billion annually on oil-based fuels and estimates it can save up to \$1 billion per year by switching to gas. The switch, when coupled with the power utility's plans to raise electricity tariffs to 7 cents/kWh, is an important element in restoring the financial health of Indonesia's power industry.

These incentives have raised domestic demand estimates and led to a number of new gas sales agreements. In December 2002, PSCs and gas buyers signed 14 gas and LPG agreements under the direct gas marketing mechanism. In December 2003, gas producers signed 13 agreements worth \$14 billion that will supply a total of 1.3 bcf/d to power and petrochemical buyers. PGN projects conservatively that between now and 2015, Indonesia's domestic gas demand will increase by as much as 60 percent to 3.7 bcf/d.

Impediments to Domestic Gas Growth

Despite these changes spurring gas demand, impediments limit domestic gas growth. The primary obstacles include a limited transmission and distribution system, financing limitations, and continued regulatory uncertainty. Because Indonesia has an inadequate gas transmission and distribution network, state-owned gas utility PGN plans three more transmission projects to meet rising power sector demands for gas, as follows:

Projects	Length Km	Capacity mmscfd	Completion
Grissik-Jakarta	606	400	2006
Kalimantan -Java	1,620	1,500	2008/ 2010
E.Java-W.Java	680	350	2008/ 2010

In addition to these projects, the GOI may also build an LNG receiving terminal in West Java, to process and distribute gas from existing LNG plants (Bontang), as well as future plants in Papua (Tangguh) and South Sulawesi (Donggi). PGN is also investigating the feasibility of shipping compressed natural gas (CNG) over short to medium distances.

Many producers require explicit financial guarantees. The government's reluctance to provide such guarantees poses another obstacle to domestic gas growth, according to industry observers. In the power industry, a number of PSCs have requested that PLN provide standby letters of credit (SBLC) before investing in long-term gas supply agreements. According to industry analysts, PLN's credit availability with government-linked banks is limited. PLN has asked Bank Indonesia to exclude SBLCs from the legal lending

limit in order to get around this obstacle. (Note: some power analysts suggest that if PLN would permit higher returns on investment, companies would be willing to assume more of this risk themselves).

A recent Wood Mackenzie gas and power study concurs that financing limits growth in the domestic gas market. According to the study, most export credit agencies (ECAs) remain wary of large, domestic-oriented projects in Indonesia. Future financing will be easier for offshore-structured, export-oriented projects that minimize political risk and generate dollar revenues. Financing will also be more likely if companies like Pertamina, with hard currency offshore accounts, participate.

Regulations Are Still Undefined

The current uncertain regulatory environment also limits domestic gas growth, because it inhibits the exploration and development of potential gas reserves. Despite the DMO provisions in the 2001 Oil and Gas law to promote gas use, no accompanying upstream or downstream regulations have been issued to define the “rules of the game.” Nor do current regulations clearly define Pertamina’s new oil and gas role. In addition to the regulatory uncertainty, doubts about contract sanctity, contract extensions, security, and taxation hurt the gas investment climate.

As mentioned previously, this uncertainty has affected the amount of new gas exploration. According to the American Chamber of Commerce, gas blocks signed before 1971 still account for nearly 60 percent of Indonesia’s commercial reserves. Blocks signed after

1990 account for only 14 percent of commercial reserves.

A Trans-ASEAN Gas Pipeline?

ASEAN’s Energy ministers signed a memorandum of understanding on July 5, 2002 to push ahead with a \$7 billion natural gas pipeline project in a bid to alleviate concerns over oil supply shortages and to improve economic development. Minister of Energy and Mineral Resources Purnomo Yusgiantoro said the project’s masterplan has been completed, and a council will soon be established to oversee the completion of the gas grid. Purnomo said more than 1,000 kilometers of the grid has already been constructed. ASEAN has identified the need for 4,500 kilometers of pipeline to complete the project, which might reach 6,000 kilometers, if the necessary new Indonesian domestic pipelines are included.

Purnomo said Indonesia will be a major player in the trans-ASEAN gas pipeline project because of its enormous gas reserves. ASEAN members have previously said that a regional natural gas pipeline, as well as an electricity grid, is the most efficient way for ASEAN countries to prevent a future energy crisis. Indonesia has already developed several pipelines - from West Natuna to Singapore, West Natuna to Malaysia, and from South Sumatra to Singapore. It is also studying a possible pipeline from West Natuna to Thailand.

ASEAN members will develop regulations and frameworks for the cross-border supply, transportation and distribution of natural gas throughout the region. This will be supervised by a future ASEAN Gas Consultative Council. The

key reason behind the gas grid is the need to reduce the consumption of oil and to provide backup energy sources for ASEAN members. ASEAN members hope to complete the gas grid by 2020.

Expanding Future Production

Indonesia has significant gas reserves but much of the gas is non-exportable. There is also a geographical mismatch between location of gas reserves and energy needs. In addition to geographical constraints, other disincentives to developing Indonesia's gas resources include the availability of financing, long project lead-time, and the lack of incentives to explore and exploit gas reserves. With more competitive fiscal terms and a market-based pricing system, there would be an incentive to exploit more of Indonesia's natural gas reserves. Four key areas have been identified by the private sector to increase gas development in Indonesia:

- Increase incentives to find and produce natural gas;
- Promote private investment and ownership, as well as stability and cost recovery for those firms that invest in major gas facilities;
- Encourage multi-buyer and multi-seller gas marketing; and
- Establish incentives for domestic gas usage.

Domestic Gas Usage

PGN estimated that current domestic demand is about 20 percent of the energy mix.

The World Bank and the Asian Development Bank (ADB) have urged Indonesia to adopt a pricing regime more conducive to providing companies with an incentive to find and produce gas. If gas were able to compete on price with alternative energy forms in the market place, the full value and potential of Indonesia's gas reserves would be realized. Without pricing changes, the domestic gas market is constrained by the lack of incentives for exploration and development of gas fields too small to support LNG but large enough for domestic gas supplies. A second, major constraint is the absence of a predictable basis for forecasting the future value of gas, such as an indexed price formula. A final constraint has been the subsidy provided for alternative fuels.

Under the historic system for determining gas prices, price in supply contracts is reached through negotiations on a field-by-field basis between Pertamina and individual producers after the discovery of the gas field. Prices are fixed for a designated supply for the duration of the contract. Hence, the producer price for gas is different for each PSC. Consumer prices are set on a cost-plus basis.

Domestic Gas Pricing (Per MMBTU)

I. FUEL

1. Fertilizer Plant	\$1.00 – 2.00
2. Steel Industry	\$2.00
3. Electricity	\$2.45 - 3.00
4. Cement Industry	\$2.70 - 3.00
5. Paper Industry	\$1.30
6. Refinery	\$1.49
7. Plywood	\$0.97
8. City Gas	Rp 2,500 - 4,150

II. FEEDSTOCK

1. Fertilizer	\$1.00 – 2.00
2. Steel Industries	\$0.65
3. Methanol Plant	\$1.42 – 2.00

Integrated Transmission System

The South Sumatra pipeline is part of a state gas company Perusahaan Gas Negara (PGN) plan for an integrated gas transmission pipeline system, known as the Integrated Transmission System (ITS). The ITS will eventually link the islands of Sumatra, Java and Kalimantan via a 3,588-kilometer integrated gas pipeline. Reputed to be Southeast Asia's longest, the pipeline is being funded by the World Bank, ADB and other institutions. PGN's network will flow 2.2 BCFD of natural gas after its scheduled completion in 2010.

Project One: Grissik-Duri Pipeline:

Phase One became operational in 1998. The 544-kilometer Grissik/Duri gas transmission pipeline transports 310 mmscf/d of natural gas from the Grissik gas plant in ConocoPhillips Indonesia's Corridor PSC in South Sumatra. The project will supply Caltex's Duri Steam Flood Project in Central Sumatra for 15 years. ConocoPhillips is the gas producer, Caltex is the gas buyer and PGN is the owner of the pipeline network.

The Grissik/Duri pipeline project is the first part of a 850-kilometer gas transmission pipeline to link South Sumatra to Singapore. Phase Two, which covers a 530-kilometer leg from Grissik to Singapore by way of Batam Island was completed in August 2003. Both the Grissik/Duri pipeline and the Grissik/Singapore pipeline have been included in the TransgasIndo pipeline consortium, jointly owned and operated by PGN and a joint venture with ConocoPhillips, Petronas, Talisman, and Singapore Petroleum.

Project Two: South Sumatra–West Java Pipeline:

This 606-kilometer pipeline project will provide gas from ConocoPhillips and Pertamina fields to West Java power plants and industrial users. The pipeline will be funded by a combination of JBIC loans and proceeds from PGN bond and IPO offerings. All parties hope to complete the project and have first gas in 2006. One part of the project will provide 220 mmcf/d of gas (ramping up to 400 mmcf/d) from ConocoPhillips' prospective Suban II facility with the Muara Tawar, Tanjung Priok and Muara Karang gas-fired power plants in Jakarta. In July 2003, ConocoPhillips and PLN signed a HOA to supply gas to the plants.

Another part of the pipeline will be a loop from Maringgai in South Sumatra to Cilegon and Cimanggis in West Java. This pipeline will supply natural gas from Pertamina's gas fields in Prabumulih to West Java industrial users. Pertamina and PGN have already agreed to provide 250 mmcf/d to West Java once the pipeline becomes operational. The two companies are presently negotiating to increase the gas transmission volume by an additional 250 mmcf/d.

Project Three: East Kalimantan-Java:

The most ambitious of the four projects, the 1,600-kilometer East Kalimantan-Java pipeline would transport up to 1.5 bcf/d of gas from Bontang in East Kalimantan to Central and West Java through a still-undetermined location on the coast of Java. PGN would partially fund the project from its bond and IPO offering, but will need substantial outside financing. Timing of the project depends on a number of factors, including Java gas demand increases and a proposed LNG

regasification facility in West Java. Presently, PGN plans project construction in 2008 and first gas in 2010.

Project Four: East/West Java Pipeline:

This proposed project consists of two phases, the 292-kilometer Cirebon (West Java) to Semarang (Central Java) pipeline and the 388-kilometer Semarang to Surabaya link. The project will transport about 700 mmcf/d of natural gas. There is no set timeframe for project completion yet.

LNG AND LPG

Indonesia remained the world's leading exporter of LNG, with about 22.9 percent market share in the world market and over 33 percent share in the Asia and Pacific markets. Currently, Indonesia has the capacity to produce a total of 31.6 million MT of LNG at the Arun plant in North Sumatra and the Badak (Bontang) plant in East Kalimantan. However, actual production in 2002 reached only 26.2 million MT, compared to a peak of 29.8 million MT in 1999. LNG is still one of the significant foreign exchange earners. LNG exports were valued at \$5.6 billion in 2002, a 3.7 percent increase if compared with \$5.4 billion in 2001. Japan remained Indonesia's top market for LNG, with 69 percent of the total, followed by South Korea (19.4 percent) and Taiwan (11.6 percent).

World LNG Trade in 2002

Exporting Country	Billion M3	%
Indonesia	34.3	22.9
Algeria	26.9	17.9
Malaysia	20.5	13.7
Qatar	18.6	12.4
Australia	10.0	6.7
Brunei	9.1	6.1
Oman	8.0	5.3
Nigeria	7.8	5.2
UAE	6.9	4.6
Trinidad	5.3	3.5
USA	1.7	1.1
Libya	0.6	0.4
Total	150.0	100.0

Source: BP Statistical Review

Indonesia signed its first long-term LNG contract in 1973, with the first shipment from Bontang in 1977 and the first shipment from Arun in 1978. Indonesia signed a number of additional LNG contracts between 1973 and 1995.

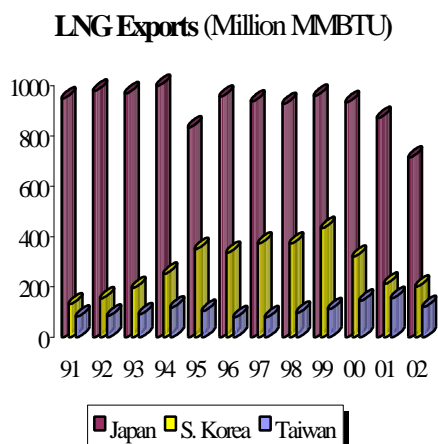
Indonesia's LNG exports are under long-term contracts between Pertamina and its customers.

New LNG Sales and Contract Extensions

The benchmark prices that China negotiated in late 2002 with Australia and Indonesia (between \$2.40-\$3.00/mmbtu) for the Guangdong and Fujian LNG terminals confirmed a downward pressure on LNG prices. Japan (the world's largest LNG importer), whose import prices for 2002 averaged \$4.27/mmbtu, took particular notice. As a result, Indonesia's traditional LNG markets (Japan, South Korea and Taiwan) are eyeing new sources of LNG and lower prices. Indonesia's LNG marketing abilities will be tested as it tries to extend 12 mmpa in Japanese contracts due to expire in 2010.

As a result of these changes, Indonesia seeks alternative marketing opportunities in the U.S. to protect against contract changes with its existing Asian buyers. During the second half of 2003, the GOI signed an MoU with Marathon to supply 6 MT of LNG to a proposed West Coast U.S. or Baja California LNG receiving terminal. Similarly, BP signed a Heads of Agreement with Semptra Energy in December 2003 to supply 3.7 MT of LNG annually to the West Coast or Baja beginning in 2007.

The news on LNG sales hasn't been all good. In July 2003, Taiwan utility Taipower chose Qatar's Rasgas project over Tangguh to supply 1.7 MT per year to its Tatan power plant.



Arun

The Arun LNG plant is operated by the PT Arun Natural Gas Liquefaction Company, of which 55 percent is owned by Pertamina, 30 percent by Mobil LNG Indonesia Inc. (an ExxonMobil affiliate) and 15 percent by Japan Indonesia LNG Company (JILCO). ExxonMobil/BP Migas is the sole supplier of natural gas to Arun, whose production capacity is now about 6.4 MT per annum. ExxonMobil has extracted about 90 percent of the gas reserves in its Arun gas field and gas deliveries to the six-train PT Arun LNG plant have started to decline. Two LNG trains were shut down in 2000 with the expiration of the Arun I contract and, as the remaining contracts expire, additional trains will be shut down. The Arun facility is expected to produce 3.0 MT in 2005, 1.2 MT in 2010, and will discontinue operations in 2014.

Due to the normal decline in the Arun area fields there is insufficient gas to supply all fertilizer plants and still supply gas to PT Arun for the manufacture of LNG to meet Pertamina's contracted sales. The government may have to acquire 8-10 LNG cargoes from abroad

in 2004 if it decides to maintain like-kind gas supply to fertilizer plants and still comply with its LNG contractual requirements.

Continued gas production declines in the Arun area fields will result in lower LNG sales and deliverable cargoes: from 113 cargoes in 2002 to about 60 cargoes in 2005. Based on the expected rate of decline, there will normally be two LNG trains in operation between 2005 and 2008.

The Arun area fields include: the original Arun field; the South Lhoksukon A and D gas fields, located 15 kilometers from Arun; the Pase A and B gas fields, located north of Arun; and the North Sumatra Offshore (NSO) gas field. The NSO field sits 100 km offshore from the Arun LNG plant.

Bontang

The eight-train (A through H) Bontang facility in Badak, East Kalimantan has 21.6 million MT of production capacity.

The plant is operated by PT Badak NGL Company, which is 55-percent owned by Pertamina, 20-percent by Vico (which is 50-percent owned by BP), 10-percent by TotalFinaElf, and 15-percent by Japan Indonesia LNG Company (JILCO). Gas is supplied from production sharing arrangements between Pertamina, Unocal, Vico and Total. LNG production from the Bontang facility in 2002 declined to 19.9 million MT from 21.36 million MT in 2001.

In 1995, Pertamina signed two 20-year contracts for Bontang's "H" train with Korea Gas Company and Chinese Petroleum Corporation (Taiwan).

Indonesia advanced plans to build a ninth LNG train (train I) at the Bontang facility. The government has in principle given the green light to Pacific Oil and Gas Ltd to build and operate train I. Hong Kong Pacific Oil & Gas company plans to market LNG to Jiangsu province. A final decision on Train I is expected in 2004.

Toward the end of 2003, Bontang experienced a variety of production problems that constrained its ability to provide gas for both LNG production and feedstock for national fertilizer plants in East Kalimantan. At current production levels, Bontang will be about 19 cargoes short of its LNG contract requirements (133 cargoes) in 2004 if the PSCs continue gas supplies to the Pupuk Kaltim fertilizer complex. Pertamina is trying to restructure its LNG supply commitments in order to maintain fertilizer gas supplies. However, the PSCs and Pertamina may purchase between 2-6 LNG cargoes abroad in 2004 to meet Bontang's LNG contracts.

Tangguh

BP is the major shareholder and operator of the Tangguh LNG project, which encompasses three PSCs in the Berau-Bintuni Bay region of western Papua. The Tangguh gas fields contain 14.4 trillion cubic feet TCF) of proven and certified natural gas reserves. The planned LNG processing plant will produce seven million tons of LNG per year from two initial processing trains. In April 2003, BP selected a group led by Halliburton's KBR (Kellogg, Brown and Root) unit to build the \$1.4 billion LNG plant. BP Indonesia holds a 37.16% stake, with the balance shared by CNOOC (16.96%), Mitsubishi (16.30%),

Nippon (12.23%), KG (10.00%), and LNG Japan (7.35%).

The Indonesian government and BP have obtained market commitments for 7.65 MT of Tangguh's LNG. In August 2002, the project won the contract to supply 2.6 MT of LNG per year to China's Fujian province for a 25-year term beginning 2007. It wasn't until August 2003 that the project found another committed buyer – South Korea's K Power and POSCO – for 1.35 MT of LNG per year for a 20-year term beginning 2005. In December 2003, the project signed an HoA with U.S. Sempra Energy to supply 3.7 MT of LNG for a 20-year term beginning in 2007 (until Tangguh becomes operational LNG will likely come from the Bontang LNG facility in East Kalimantan). Tangguh's developers also hope that a PLN-proposed LNG regasification facility in Java could be another target for LNG sales. In October 2003, BP hinted that impending new LNG contracts with Japan would round out the project's initial LNG capacity and make Tangguh financially viable; however, the company has ordered long-lead equipment and expects the project will receive a final go-ahead in 2004.

Sulawesi - The Fourth LNG Center?

In 2003, Pertamina continued exploring its options to develop the Matindok block in Central Sulawesi. Matindok consists of the Donggi gas block, which is operated by Pertamina, and the Senoro-Toili gas block, which is jointly operated by Pertamina and Medco's Exspan Nusantara. Delineation results in mid-2003 revealed less-than-expected recoverable gas reserves of 3.4 TCF, with additional potential as high as 18 TCF.

Despite the disappointing news, Pertamina said it would commence a new drilling campaign at Donggi in early 2004 in an effort to increase the block's proven reserves and justify plans to develop an initial two-train LNG production facility at Donggi.

Donggi's potential has captured the interest of foreign companies, including ChevronTexaco, Royal Dutch/Shell, Marathon Oil, Mitsui, CNOOC, PetroChina and Petronas, all of whom held talks with Pertamina during 2003 on possible joint ventures. Marathon and Pertamina discussed a possible agreement to supply LNG from Donggi to the U.S. West Coast/Baja California, though progress has been delayed pending certification of additional reserves.

Rentech, as well as Japan's Mitsui, have approached Pertamina separately about developing a possible gas-to-liquids (GTL) facility at Donggi. In March 2003, Rentech conducted a feasibility gas-to-liquid study for Central Sulawesi and is in discussions with Pertamina to finalize an HOA to develop a 15,000 bopd GTL plant at Donggi. GTL, which combines high-technology with abundant natural gas reserves to produce a range of clean, synthetic fuels, could be an alternative project should Donggi's gas reserves be too small to make an LNG project economically viable.

plant reported no LPG production from its LPG extraction plant in since 2000, whereas it produced 216 thousand MT in 1999. Indonesia exported over 60 percent of its LPG production in 2002, valued at just under \$411.5 million, to major Asian markets: Japan, China, Taiwan, Philippines, Australia and Singapore.

Liquid Petroleum Gas

Total liquid petroleum gas (LPG) production declined slightly in 2002 to 2.1 million MT from 2.2 million MT in 2001. LPG production at five of Pertamina's refineries rose 5.4 percent to 814.2 thousand MT in 2002 from 772.1 thousand MT in 2001. The Arun LNG

PETROCHEMICALS AND FERTILIZERS

Introduction

Indonesia's petrochemical industry is characterized by abundant natural resources in crude oil and natural gas, a large and growing market of more than 220 million people, but constrained by a lack of integration between the petroleum and petrochemical industries. In addition, many of the companies have heavy debts, and Indonesia's poor investment climate significantly limits interest in this sector. The combination of growing demand and limited capacity, despite the proximity of oil and gas production centers, means Indonesia imports a number of key petrochemicals, missing opportunities for job creation, foreign exchange revenues and a domestic buffer from international price changes.

The Asian economic crisis had an adverse impact on the country's petrochemical industry. Petrochemical producers faced soaring prices for imported materials, shrinking domestic demand, and severe financial problems. According to the GOI, the petrochemical industry currently owes about Rp 10 trillion (\$1.2 billion) to the banking sector. As a result, Indonesia's plans to expand petrochemical production have been put on hold.

One company caught with massive debt obligations was Chandra Asri Petrochemical Center (CAPC), a producer of ethylene and propylene. CAPC's debts amounted to \$463.6 million to the Indonesian Bank Restructuring Agency (IBRA) and \$731 million to private lenders led by Marubeni Cooperation of Japan.

In 2002, the government reached a debt-for-equity swap with Japanese creditors. Marubeni agreed to convert \$147 million of its loans into a 24.59 percent equity share. IBRA took a 25.9 percent stake in Chandra Asri under the same agreement. In 2003, following many months of negotiation, IBRA reached agreement to sell its stake CAPC to Thailand's Glazer & Putnam Investment, for an estimated \$71.6 million. When the sale is complete, Chandra Asri will belong to company founder Prayogo Pangestu (49.6%), Glazer & Putnam (25.9%) and the Japanese consortium (24.59%).

Tariff reduction postponed

In 2003 the government, which had committed to reduce tariffs of petrochemical products to comply with the Common Effective Preferential Tariff (CEPT) and ASEAN Free Trade Agreement (AFTA) schemes, decided to postpone further reductions. The Energy Ministry defended the decision, citing that current rates already ranged between 0-10 percent.

In 1998, the government had lowered import tariffs on petrochemical products (ethylene, propylene, styrene, polyethylene, polypropylene, polystyrene and polyvinyl chloride) and their derivatives from 25-35 percent to 10-20 percent, effective January 1, 1999. Minister of Finance Decree No. 187 of May 2000 went a step further by reducing import tariffs for 708 items, including upstream and midstream petrochemical products.

This decree lowered import duties on selected petrochemical products (ethylene, propylene, styrene, polyethylene,

polypropylene, and their derivatives) as of

Import Tariffs of Selected Petrochemical Products (%)

Products	Pre Jan 1 1999	Jan 1 1999	Jun 1 2000
Ethylene	25	10	0
Propylene	25	10	5
Polyethylene	35	20	5
Polypropylene	35	20	5
Polystyrene	25	20	10
Polyvinyl Chloride	35	20	10

June 1, 2000. Tariffs on ethylene and propylene (both produced by CAPC) are now zero percent and five percent, respectively. Tariffs for polyethylene (produced by PT Petrokimia Nusantara Interindo and CAPC) and polypropylene (produced by PT Tri Polyta Indonesia and PT Polyrama Propindo) have been reduced from 20 percent to 5 percent.

Benzene & Paraxylene

Benzene and paraxylene are currently produced by Pertamina's Cilacap refinery with production capacity of 123,000 MT per year and 270,000 MT per year, respectively. Production rates of the two products are insufficient to meet domestic demand. According to the Department of Industry and Trade, domestic demand of benzene and paraxylene increased to 1.2 million MT and 2.2 million MT, respectively, in 2003.

PTA

The growth of Indonesia's textile industry and the demand for polyester raw materials provided the stimulus for Pertamina and private investors to enter into the production of purified terephthalic acid (PTA). Since 1998, five PTA plants have been in operation --

Pertamina Plaju Aromatic, Bakrie Kasei PTA, Amoco Mitsui PTA Indonesia, Polysindo Eka Perkasa and Polyprima Karya Reksa, with a combined capacity of 1.8 million MT per year. The bulk of production is sold to Indonesian polyester makers.

Three Japanese partners led by Mitsubishi Kasei Corp. own Bakrie Kasei, the largest PTA producer in Indonesia with a total capacity of 500,000 MT per year. (PT Bakrie Brothers sold its 20 percent share in the company to its former partners in late 2000.) Bakrie Kasei's first PTA production unit commenced operation in 1994 and the second unit in 1996.

Amoco-Mitsui PTA Indonesia, a joint venture between Amoco Chemical (50 percent), now incorporated into BP, Mitsui Petrochemical Industries (45 percent) and Mitsui Company (5 percent), commissioned a PTA factory in Merak, West Java, in February 1998, with an annual production capacity of 350,000 MT per year. PT Polysindo Eka Perkasa of the Texmaco Group started PTA plant operation in April 1997 with capacity of 360,000 MT per year. PT Polyprima Karyareksa of the Napan group commenced commercial production in 1997 with annual capacity of 285 thousand MT/Y.

Polypropylene

Three plants, with a total production capacity of 600,000 MT per year, produce polypropylene, which is made from propylene. They are Pertamina's plant in Plaju, South Sumatra, with an annual production capacity of 60,000 MT; Tri Polyta's plant in Cilegon, West Java, with an annual capacity of 360,000 MT; and Polyrama Propindo, near Pertamina's

Balongan refinery in West Java, with an annual capacity of 180,000 MT.

Ethylene

Chandra Asri Petrochemical Center (CAPC) is the only ethylene producer in Indonesia, with an annual capacity of 520,000 MT. Actual production is probably 80 percent of capacity, well below the country's annual demand of 755,000 MT.

Polyethylene

Indonesia's first polyethylene plant, PT PENI in Merak, West Java, came on stream in 1993, with an annual production capacity of 250,000 MT. PT PENI is majority owned and operationally managed by BP Chemicals. In August 1998, the company completed its expansion project and increased its annual capacity to 450,000 MT. In 1999, CAPC increased the country's total polyethylene production capacity to 750,000 MT.

The demand for raw materials of plastics in Indonesia is growing around 8% per year and national production has been unable to meet the demand. In 2002, the total imports of polyethylene were 220,000 tons, and will likely increase from year to year. Without new investment, the industries cannot increase the national production capacity and Indonesia will have to import greater amounts of raw materials.

Methanol

PT Kaltim Methanol Industry in Bontang, East Kalimantan, which came on stream in 1998, brought Indonesian methanol production capacity to 990,000 MT per

year. Prior to 1998, methanol was produced only by Pertamina's Bunyu Refinery, now owned by Medco Energi. PT Kaltim Methanol has plans to be a major methanol supplier to Asia. The first shipment of methanol to Japan was in March 1998. PT Kaltim, a subsidiary of Humpuss Group, has an annual production capacity of 660,000 MT.

The Projects

The long-suspended \$900 million Trans Pacific Petrochemical Indonesia (TPPI) project in Tuban, East Java, may continue. In 2003, Japanese creditors agreed in principle to the government's draft guarantee letter for the TPPI project, which will allow Pertamina to receive \$400 million from a Japanese consortium to fund the remainder of the project. The Tirtamas Group transferred majority ownership of the project to IBRA in 1998 after the conglomerate failed to repay \$635 million in bank loans. IBRA plans to transfer 15% ownership to state-owned Pertamina. Siam Cement of Thailand and Nissho Iwai Corporation are also shareholders in the project.

According to Pertamina, the government's letter does not state the GOI's readiness to financially guarantee the project, but informs lenders that Pertamina will guarantee the supply of low sulphur wax residue (LSWR) for the first four years of the project in return for 15% ownership. Japanese creditors are studying the proposal. After paying a 10 percent processing fee, Pertamina would then sell TPPI products, with most of the proceeds (about \$350 million), paid out to TPPI's main contractor JGC of Japan.

JGC would use the funds to finish construction of TPPI's petrochemical

storage tank. The tank will store middle distillate (crude diesel and kerosene) and light naphta (premium gasoline). If completed, TPPI will have the capacity to produce 700,000 MT of ethylene; 500,000 MT of paraxylene; and 300,000 MT of benzene annually, greatly reducing imports of these products and carrying a potential savings of \$1 billion per year to country.

Fertilizers

Given Indonesia's abundant supply of natural gas and strong domestic and export demand for fertilizer in Asia, the fertilizer industry presents a potential area for growth, provided the GOI loosens its tight control over the industry. Installed production capacity at Indonesia's 12 fertilizer plants operated by six companies (five state-owned companies and one ASEAN joint venture) is 7.0 million MT of urea and 4.6 million MT of ammonia per year.

Urea and ammonia production in 2002 increased to 6.0 million MT and 4.1 million MT from 5.2 million MT and 3.5 million, respectively. In 2001, urea and ammonia production were affected by the suspension of production at the two large fertilizer plants in Aceh (ASEAN Aceh Fertilizer, AAF, and Pupuk Iskandar Muda, PIM I). Urea exports declined slightly to 1.1 million MT valued \$124 million in 2002, with main destinations being Vietnam, Taiwan, Thailand, South Korea, the Philippines, Malaysia, New Zealand and Japan.

Designated a strategic commodity, the government directs state-owned fertilizer companies meet domestic demand first and the remainder can be exported, with the exception of PT ASEAN Aceh

Fertilizer (AAF), which exports its fertilizer to ASEAN countries. Domestic demand for fertilizer continues to increase at average of 3.0 percent per year. The government estimates domestic demand will reach 6 million MT for urea and 1.3 million MT for phosphate by 2005.

To meet domestic demand Indonesia also imported fertilizer amounting to 1.5 million MT valued at \$200 million in 2001 up from 1.3 million MT valued \$185 million in 2000. The largest Indonesian fertilizer import is potassium chloride, which is used as an additive to enhance performance of other fertilizers. This particular additive is mainly imported for use in plantations that produce soybeans, tobacco and tea.

The fertilizer industry utilizes about 210 BSCF of natural gas per year and purchases gas in U.S. dollars at the government's subsidized price of \$1.3/mmmbtu. (The government reduced the natural gas price from a range of US \$1-2/mmmbtu as a development incentive to the fertilizer industry.) Recently, a number of plants have had difficulty paying their dollar-denominated gas bills to Pertamina. Fertilizer is sold to farmers in rupiah at government-administered prices.

The Indonesian Government resumed five delayed fertilizer projects affected by the financial crisis due to the anticipated increase of domestic demand. The five projects are the \$310 million Pupuk Iskandar Muda (PIM) II; \$304.6 million Kujang IB; \$359.7 million Pupuk Kaltim IV; \$26.2 million Petrokimia Gresik NPK fertilizer plant; and \$34 million ASEAN Aceh Fertilizer's hydrogen peroxide plant.

The PIM II project is in the process of starting commercial operations. The plant was commissioned in late 2003 and was planned to begin fertilizer production in early 2004. However, there is currently no gas supply arrangement for this plant, so production operations may be postponed.

PT Kaltim Parna Industry (KPI), a US \$240 million ammonia plant in East Kalimantan, is a joint venture between two Japanese companies (Mitsubishi 55 percent and Asahi Chemical Industry – 10 percent) and two Indonesian companies (PT Parna Raja -- 25 percent and PT Pupuk Kaltim -- 10 percent). After postponing construction for three years due to the economic crisis, KPI was completed in 2002, with an annual capacity of 500,000 MT. The plant consumes 55 mmscf/d from three gas fields operated by Total, Unocal and Vico. KPI signed a 20-year gas purchase agreement with Pertamina in July 1999.

PT ASEAN Aceh Fertilizer (AAF): The ASEAN-sponsored urea fertilizer plant is located near the Arun gas fields at Lhokseumawe in North Sumatra and is 60-percent owned by Indonesia, 13-percent by Malaysia, 13-percent by the Philippines, 13-percent by Thailand, and 1-percent by Singapore. The plant produced 586,000 MT of urea and 405,000 MT of ammonia in 2000.

Gas supplies to the AAF plant have been curtailed because ExxonMobil's gas production is enough only to meet Pertamina's LNG sales commitments. AAF is currently shut down due to the lack of gas supply.

APPENDIX 1: KEY ECONOMIC INDICATORS

	1998	1999	2000	2001	2002
Population (Mln) (a)	202	204	205	208	211
GDP at current prices (Rp Trillion)	955.8	1,099.7	1,264.9	1,449.4	1,610.0
GDP at constant 1993 prices (Rp Trillion)	376.4	379.4	398.0	411.7	426.7
Real GDP growth (%)	-13.2	0.2	4.7	3.3	3.6
Avg. Exchange Rate (Rp/\$)	9,875	7,809	8,350	10,265	9,220
GDP (\$Bln)	97	141	151	141	175
GDP per capita (\$)	480	691	736	679	829
Gov't Spending (as % of GDP)	18.0	19.0	19.0	N/A	20.4
Consumer Price Inflation (%)	77.6	2.0	9.4	12.6	10.0
Foreign and Domestic Debts (\$Bln)	71.5	144.5	152.8	135.6	147.6
- Foreign Debts	67.3	75.9	74.9	71.4	74.7
- Domestic Debts	4.2	49.0	62.8	63.4	72.9
Debt to GDP Ratio (%)	72	102	100	93	72
US Economic Aid (\$Mln)	250.0	316.6	205.0	N/A	N/A
Unemployment (%)	5.5	6.4	6.1	9.0	10.0
International Trade (US\$Million)					
Exports - Total	48,848	48,665	62,124	56,321	57,159
- Growth Rate of Total Exports (%)	-8.6	-0.2	27.5	-9.3	1.6
- Oil and Gas	7,872	9,792	14,367	12,636	12,106
- Oil and Gas as % to total	16.1	20.1	23.1	22.4	21.2
- Non-Oil and Gas	40,976	38,873	47,757	43,685	44,896
- Major Export Markets					
-- Japan	9,116	10,397	14,415	13,010	12,045
-- USA	7,031	6,896	8,476	7,749	7,559
-- Singapore	5,718	4,931	6,562	5,364	5,349
-- European Union	7,766	7,085	8,665	7,745	7,898
-- Growth Rate of Exports to US (%)	-1.4	-1.4	23.2	-9.4	-1.3
Imports - Total	27,337	24,003	33,513	31,962	31,289
- Growth Rate of Total Imports (%)	-34.4	12.1	39.6	2.6	1.1
- Major Country of Origin					
-- Japan	4,292	2,913	5,397	4,690	4,409
-- USA	3,517	2,839	3,390	3,207	2,640
-- Singapore	2,543	2,526	3,789	3,147	4,100
-- European Union	5,866	3,801	4,163	4,047	3,576
-- Growth Rate of Imports from US (%)	-35.4	20.0	21.4	-5.9	-18.8
Trade Balance	21,511	24,462	28,611	24,359	25,919
Foreign Investment (US\$Mln) (c)					
- Japan	1,331	644	1,961	772	510
- UK	4,745	507	3,574	723	720
- Singapore	1,267	731	535	1,141	3,328
- Hong Kong	549	77	106	40	1,712
- Taiwan	165	1,489	131	72	38
- USA	568	137	243	73	468
- Australia	85	2,458	160	779	232
- S. Korea	202	263	689	369	370

- Malaysia	1,060	186	168	2,240	72
- Germany	71	87	959	43	36
- Netherlands	412	49	1,159	89	244
- China	8	58	154	6,055	33
- Others	3,105	4,205	5,574	2,649	1,981
TOTAL INVESTMENT APPROVAL	13,568	10,891	15,413	15,045	9,744
Oil Investment (d)	4,828	4,049	3,605	4,202	3,418

a) Based on population census 2000 and projection by Central Bureau of Statistics.

b) Public and private.

c) These figures are investment approval and do not include investment in the oil and gas Sector.

d) Petroleum company expenditures

: Government Budget (Rp Trillion)

	99/00 Budget	2001 Audited	2002 Budget	2003 Budget	2004 Draft Budget
Tax revenues	126.0	185.5	219.3	254.1	271.0
- Oil and gas	13.0	23.1	15.7	14.8	12.3
- Non-oil and gas	113.0	162.4	203.6	239.3	258.7
Non-tax revenues	61.9	100.7	82.2	82.0	72.2
a. Natural resources	45.4	85.7	63.2	59.4	44.8
- Oil and gas	45.4	66.6	58.5	56.2	41.7
- Non-oil and gas	-	9.6	4.6	3.2	3.2
b. Others	16.5	15.0	19.0	22.6	27.4
Total Revenues	187.8	300.6	301.9	336.2	343.2
Expenditures	231.9	340.3	332.5	370.6	368.8
- Routine	156.7	218.7	195.0	188.6	185.8
- Development	45.2	45.5	47.1	65.1	68.1
Balance	-44.1	-54.3	43.0	-26.3	-25.6

Source: Department of Finance

a: Revenues originated from tax and non-tax.

b: Includes various central government transfers to cities/regencies and provinces

Balance of Payments (US\$Billion)

	1999	2000	2001	2002	2003 Proj.	2004 Proj.
Exports (FOB)	51.2	65.4	57.4	58.8	61.4	61.1
- Oil/Gas	10.3	15.1	12.6	12.0	12.7	N/A
- Non-Oil\Gas	41.0	50.3	44.8	46.3	48.7	N/A
Imports (FOB)	-30.6	-40.4	-34.7	-35.6	-39.4	-40.3
- Oil/Gas	-2.9	-6.0	-15.8	-6.6	-8.1	N/A
- Non Oil/Gas	-26.6	-34.4	-29.0	-28.9	-31.3	N/A
Services	-14.9	-17.1	-15.8	-15.7	-16.9	-16.5
- Oil/Gas	-3.2	-4.6	-4.3	-4.3	N/A	N/A
- Non-Oil\Gas	-11.7	-12.5	-11.5	-11.4	N/A	N/A
CURRENT ACCOUNT	5.7	8.0	6.9	7.5	5.1	4.2
- Oil/Gas	4.0	4.5	2.6	1.1	N/A	N/A
- Non Oil/Gas	2.1	3.4	4.3	6.0	N/A	N/A
Official Capital (Net)	3.2	3.2	1.1	-0.2	0.3	-1.9

Private Capital (Net)	-9.0	-9.9	-8.3	-1.5	-2.9	-3.5
Errors and Omissions	3.8	3.8	0.7	-0.7	0.5	0
TOTAL BALANCE	0.3	1.2	-2.1	5.8	2.5	-1.2
Reserves Assets	N/A	28.4	28.0	32.0	35.6	33.5

Source: Bank of Indonesia - Starting FY 2001, the fiscal year coincides with the calendar year.

APPENDIX 1.3: Selected Foreign Exchange Rates Against Rupiah

End of period	US\$	Yen	Aus\$	Sing\$	Can\$	UKPound	Euro
1995	2,308	23	1,723	1,634	1,698	3,582	-
1996	2,383	21	1,903	1,705	1,745	4,037	-
1997	4,650	36	3,310	2,773	3,247	7,709	-
1998	8,025	70	4,923	4,836	5,182	13,336	-
1999	7,100	70	4,622	4,260	4,886	11,495	7,148
2000							
2001							
January							
February							
March							
April							
May							
June							
July							
August	8,865	75	4,737	5,099	5,732	12,932	
September	9,675	81	4,745	5,482	6,127	14,237	
October	10,435	86	5,263	5,725	6,609	15,159	
November	10,430	84	5,407	5,692	6,608	14,860	
December							9,188
2002							
January							
February							
March							
April							
May							
June							
July							
August							
September							
October							
November							
December							
2003							
January							
February							
March							
April							
May							

Source: Bank Indonesia (middle exchange rates at the end of period)

APPENDIX 2: OIL AND GAS CONTRIBUTION TO THE ECONOMY

APPENDIX 2.1: Oil and Gas Contribution to Domestic Revenues (Rp Trillion)

FY	Domestic Revenues	Oil/Gas Revenues	Oil /Gas as % Total	Fuel Subsidy	Subsidy (%)
1992/93	48.9	15.3	31.4	0.7	1.4
1993/94	56.1	12.5	22.3	1.3	2.3
1994/95	66.4	13.5	20.4	0.7	1.0
1995/96	71.6	16.1	22.0	-	-
1996/97	78.2	20.1	25.7	1.4	1.8
1997/98	108.2	35.4	32.7	9.8	9.1
1998/99	157.5	41.4	26.3	27.2	18.2
1999/00	187.8	58.5	31.2	35.8	17.8
2001	286.8	89.7	31.3	68.4	23.8
2002	301.9	74.2	24.6	30.3	10.0
2003b	336.2	70.0	20.8	13.6	4.1
2004c	343.2	54.0	15.7	12.7	3.7

Source: Department of Finance Apr-Mar to Jan-Dec.	a. Beginning in 2000 GOI changed fiscal year from b. Budget c. Draft budget
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2.2: Oil and Gas Contribution to Foreign Trade (\$ Million)

Year	Exports			Imports		
	Oil and Gas	Total	Oil and Gas (%)	Oil and Gas	Total	Oil and Gas (%)
1990	11,071	25,675	43.1	1,921	21,837	8.8
1991	10,895	29,142	37.4	2,310	25,869	8.9
1992	10,671	33,967	31.4	2,115	27,280	7.7
1993	9,746	36,823	26.5	2,171	28,328	7.7
1994	9,694	40,053	24.2	2,367	31,984	7.4
1995	10,464	45,418	23.0	2,911	40,629	7.2
1996	11,722	49,815	23.5	3,596	42,929	8.4
1997	11,623	53,444	21.8	3,924	41,680	9.4
1998	7,872	48,848	16.1	2,654	27,337	9.7
1999	9,792	48,665	20.1	3,681	24,003	15.3
2000	14,367	62,124	23.1	6,020	33,515	18.0
2001	12,636	56,321	22.4	5,472	30,962	17.7
2002	12,107	57,002	21.2	6,526	31,289	20.9

Source: BPS – Central Bureau of Statistics

APPENDIX 3: SUMMARY OF OIL AND GAS STATISTICS

	1998	1999	2000	2001	2002
RESERVES					
Oil (Million Barrels)	9,691.7	9,826.3	9,612.9	9,753.4	9,746.4
Proven	5,099.9	5,203.2	5,122.7	5,094.6	4,721.8
Possible	4,591.8	4,623.1	4,490.1	5,52155.0	5,024.6
Gas (TSCF)	136.5	158.3	170.3	168.2	176.6
Proven	77.0	92.5	94.7	91.9	90.3
Possible	59.5	65.8	75.6	75.5	86.3
EXPLORATION					
New contracts signed	22	4	5	10	1
Contracts extended	0	3	2	2	-
Totally relinquished contracts	3	3	10	8	
Seismic (1000 Km)	260,124	175,258	165,932	284,300	N/A
No. of exploration wells drilled	145	89	82	80	73
Oil and gas discoveries	21	19	34	17	12
No. exploration rigs	55	46	32	24	29
Total development wells	832	847	949	854	736
No. of development rigs	61	45	93	59	65
Oil firms expenditures (US\$Mln)	4,829	4,049	3,605	4,202	3,418
- Exploration & development	2,068	1,311	758	1,158	1,076
- Production	2,303	2,250	2,433	2,615	1,676
- Administrative	457	488	413	429	666
PRODUCTION					
Crude&condensate (1,000 Barrels)	568,156	547,610	517,547	489,306	456,944
Average (1,000 B/D)	1,557	1,500	1,414	1,344	1,252
Crude oil	1,401	1,351	1,272	1,214	1,120
Condensate	155	149	142	130	132
Natural gas (BCF)	2,979	3,068	2,901	2,8071	3,036
LPG (1000 MT)	2,344	2,264	2,088	2,188	2,099
LNG (1000 MT)	26,974	28,956	26,990	23,883	26,215
EXPORTS (1,000 Barrels)					
Crude oil	247,246	250,904	195,266	216,474	185,925
Condensate	33,118	34,496	28,234	25,138	31,349
Refined products	58,897	56,496	67,085	55,118	55,490
LPG (1,000 MT)	1,761	1,745	1,306	1,484	1,268
LNG (MMBTU)	1,395,940	1,501,936	1,400,024	1,238,785	1,035,543
EXPORT VALUES (US\$Million)					
Crude& Condensate	3,445	4,950	6,282	5,650	4,929
Refined products	695	912	1,676	1,249	1,060
LNG	3,390	4,489	6,802	5,375	5,595
LPG	257	340	394	389	412
TOTAL	7,787	10,691	15,155	12,663	11,996
OIL REFINING (1000 Barrels)					
Domestic crude/condensate	261,681	254,681	285,290	256,300	234,119
Imported crude	78,028	85,364	74,941	105,096	123,852
Feedstocks/others	4,111	10,735	12,936	431	7,890
TOTAL	343,820	350,781	373,167	375,668	365,861

REFINERY OUTPUT (1000 Barrels)					
Automotive diesel oil (ADO)	91,526	91,614	95,903	95,928	93,985
Kerosene	53,290	58,492	57,897	57,992	56,301
Mogas	65,743	73,081	70,645	73,150	73,287
Fuel oil	26,325	27,156	32,482	35,087	37,302
Industrial diesel oil (IDO)	7,793	8,130	8,140	9,109	8,431
Avtur	7,195	6,046	8,441	8,620	9,319
Avgas	30	72	6	51	33
JP4/JP5	-	311	-	-	-
Subtotal Fuels (BBM)	251,859	264,901	276,697	283,389	278,658
LSWR	43,314	38,710	38,618	34,211	28,363
Naptha	11,406	14,041	16,647	20,180	16,230
LOMC	1,440	472	1,666	143	-
LPG	6,371	6,380	8,378	8,160	8,191
Asphalt	1,903	1,815	2,730	2,341	2,399
Lub base oil	1,506	2,370	2,676	2,712	2,252
Cokes	1,867	1,882	2,188	2,573	1,773
Others	1,405	1,679	3,083	3,244	2,659
Balance	21,747	17,452	20,314	18,951	24,443
TOTAL OUTPUT	343,820	350,781	373,167	375,668	365,861
IMPORT VOLUMES (1,000 Barrels)					
Crude oil	72,476	84,692	79,978	112,878	124,148
Oil products	54,054	79,902	90,026	89,622	106,928
TOTAL	126,530	164,594	170,004	202,500	230,076
IMPORT VALUES (US\$Million)					
Crude oil	977	1,501	2,304	2,852	N/A
Oil products	808	1,656	2,986	2,577	N/A
TOTAL	1,785	3,157	5,290	5,430	N/A
FUEL CONSUMPTION (Million Liters)					
Transport	23,207	23,396	25,548	26,248	27,329
Industry	10,453	11,573	11,862	12,384	12,338
Household	10,055	11,852	12,407	12,242	11,625
Electricity	4,379	3,956	5,008	5,017	6,505
TOTAL	48,094	50,776	54,825	55,891	57,797

APPENDIX 4: OIL RESOURCES AND RESERVES

APPENDIX 4.1: Distribution of Hydrocarbon Reserves

Location	January 1, 2001			January 1, 2002		
	Proven	Potential	Total	Proven	Potential	Total
a. Oil and condensate (Million Barrels)						
Aceh	148.4	38.4	186.8	147.9	38.5	186.4
North Sumatra	89.5	21.7	111.2	109.2	33.6	142.8
Natuna	70.6	12.8	83.4	169.3	238.2	407.5
Central Sumatra	2,748.2	3,043.1	5,791.3	2,263.8	3,098.7	5,362.5
South Sumatra	821.8	374.5	1,196.3	426.6	285.4	711.8
West Java	322.7	390.4	713.1	648.6	527.1	1,175.7
E/C. Java	142.3	127.8	270.1	170.1	79.1	249.2
E/S. Kalimantan	664.5	613	1,277.5	637.8	605.9	1,243.7
South Sulawesi	10.2	0	10.2	10.2	0	10.2
Irian Jaya/Maluku	80.0	41.6	121.6	138.4	118.4	256.8
Total	5,098.2	4,662.8	9,761.0	4,721.8	5,024.6	9,746.4
b. Natural Gas (TSCF)						
Aceh	3.6	6.2	9.8	3.2	6.5	9.7
North Sumatra	0.8	0.3	1.1	0.8	0.3	1.1
Natuna	32.0	23.0	55.0	31.8	23.0	54.8
Central Sumatra	2.4	3.8	6.2	2.8	6.7	9.5
South Sumatra	7.5	7.6	15.1	7.6	13.6	21.2
West Java	3.5	2.7	6.2	4.1	3.1	7.2
E/C. Java	2.7	2.7	5.4	2.0	2.3	4.3
E/S. Kalimantan	27.3	21.9	49.2	26.0	22.7	48.7
South Sulawesi	0.5	0.1	0.6	0.4	0.2	0.6
Irian Jaya	11.7	7.8	19.5	11.7	7.9	19.6
Total	92.0	76.1	168.1	90.3	86.3	176.6

Source: MIGAS

APPENDIX 4. 2: Oil and Gas Reserves and Resources

Reserves and resources	January 1, 2001		January 1, 2002	
	Oil (Bln Brl)	Gas (TSCF)	Oil (Bln Brl)	Gas (TSCF)
Reserves				
Onshore	7.4	62.5	7.3	71.8
Offshore	2.4	105.6	2.4	104.8
Total	9.8	168.1	9,746.4	176.6
Resources				
Onshore	84.3	110.0	84.3	110.0
Offshore	53.4	185.3	53.4	185.3
Total	127.3	295.3	137.7	295.3

Source: MIGAS

APPENDIX 5: EXPLORATION

APPENDIX 5.1: Seismic Activity (Kms)

Year	Pertamina	PSC ons.	PSC off.	Total
1995	1,795	6,086	54,667	63,547
1996	292	10,638	50,408	61,338
1997*	1,064	96,951	371,183	469,198
1998*	1,625	26,270	279,877	307,772
1999*	2,023	27,334	145,901	175,258
2000	656	13,184	152,086	165,926
2001	5,705	N/A	N/A	284,300
2002	-	N/A	N/A	

- Data include 2-D and 3-D seismic activity

APPENDIX 5.2: Exploration Drilling

Year	No. of Wells Completed	Discovery Wells		Success Ratio of Wells	Exploration Rigs
		Oil	Gas		
1995	80	16	16	53.3	43
1996	100	18	11	43.3	45
1997	100	14	14	40.6	40
1998	145	16	5	30.0	60
1999	89	10	9	41.3	46
2000	82	19	15	50.0	32
2001	80	11	6	36.2	24
2002	73				29

APPENDIX 5.3: Exploration Wells

Year	Pertamina	PSC		Total
		Onshore	Offshore	
1995	9	32	39	80
1996	12	39	49	100
1997	12	33	55	100
1998	5	68	72	145
1999	8	51	30	89
2000	9	25	47	82
2001	4	40	36	80
2002	3	40	26	73

Source: MIGAS

Exploration Drilling Results

Year		Oil	Gas	Dry	Total	Success Ratio (%)
1998	Wildcat	16	5	48	69	30.0
	Appraisal	32	22	22	76	71.0
	Total	48	27	70	145	52.0
1999	Wildcat	10	9	27	46	41.3

	Appraisal	18	13	12	43	72.1
	Total	28	22	39	89	56.2
2000	Wildcat	19	15	32	66	50.0
	Appraisal	7	3	6	16	62.5
	Total	26	18	38	82	52.4
2001	Wildcat	11	6	30	47	36.2
	Appraisal	15	6	11	32	66.7
	Total	26	12	41	79	48.1
2002	Wildcat	5	10	18	33	45.5
	Appraisal	7	7	6	20	70.0
	Total	12	17	24	53	54.7

Source: MIGAS

Successful Exploration Wells in 2002

No	Operator Contract Area	Well Name	Well Status	Depth feet	Well Class.
	Pertamina				
1	Jambi	S. Gelam Deep-1	Gas	9,035	Wildcat
2	C. Java	Suci-2	Oil&Gas	5,761	Delineation
3	Sulawesi	Donggi (DNG-1)	Gas	8,137	Exploration
	Amerada Hess				
4	E. Kalimantan	Halimun-1	Gas	7,876	Wildcat
5	Tanjung Biru	Papandayan-1	Gas	8,067	Wildcat
	Lapindo				
6	Berantas, E. Java	Carat-1	Gas	2,884	Wildcat
	Caltex				
7	Rokan	Gading-1	Oil	4,770	Wildcat
8	Rokan	Tilan Deep	Oil	6,400	Wildcat
	Unocal				
9	Rapak, E. Kalimantan	Ranggas West-1	Gas	9,955	Wildcat
10	E. Kalimantan	Sadewa-1	Oil&Gas	14,845	Wildcat
11	Ganal	Gandang-1	Gas	14,294	Delineation
12	Ganal	Gendalo-1	Gas	13,070	Delineation
13	Ganal	Gendalo-5	Gas	12,500	Delineation
14	Ganal	Maha-1	Gas	13,441	Exploration
	Exspan				
15	S. Sumatra	Jata-2	Gas	5,390	Wildcat
	PetroChina				
16	East Java	Sabar-1	Gas	5,640	Wildcat
	Simenggaris				
17	Tarakan, E. Kalimantan	Pidawan-1	Gas	7,504	Wildcat
	Kodeco				
18	West Madura	KE40-1	Oil&Gas	7,350	Wildcat
19	West Madura	KE 39-1	Oil&Gas	7,717	Wildcat
20	West Madura	KE 30—2	Oil&Gas	14,294	Delineation
21	West Madura	KE 40-2	Oil&Gas	7,255	Delineation

22	West Madura	KE-39-2	Oil&Gas	6,596	Delineation
	Santos				
23	Madura	Maleo-1	Gas	2,788	Delineation
24	Madura	Maleo-2	Gas	2,257	Delineation
	Talisman				
25	Ogan Komering, S. Sumatra	Mandala-4	Oil	5,407	Delineation
	CNOOC				
26	SE. Sumatra	Yani-4	Oil	10,367	Delineation
	Rims Energy				
27	Karapan, Madura	Numulities-1	Oil	7,300	Exploration
28	Karapan, Madura	Turtella-1	Gas	7,605	Exploration
	Inpex				
29	Masela	Abadi-3	Gas	13,229	Exploration

Source: MIGAS

APPENDIX 5.6: Development Wells

Year	Pertamina	PSC/TAC/JOB		Total
		Onshore	Offshore	
1996	36	766	112	814
1997	44	702	145	891
1998	20	594	218	832
1999	32	629	186	847
2000	65	743	141	949
2001	61	657	197	854
2002	71	568	97	736

Source: MIGAS

5.7: Petroleum Company Expenditures (US\$Million)

Year	Exploration/ Development	Production	Sub-Total	Others	Total
1990	1,257	1,542	2,799	348	3,147
1991	1,339	1,684	3,023	427	3,450
1992	1,200	2,221	3,421	464	3,885
1993	1,250	2,155	3,405	382	3,874
1994	1,055	2,006	3,061	388	3,449
1995	925	1,749	2,674	384	3,058
1996	1,166	1,977	3,143	420	3,563
1997	1,841	2,435	4,276	497	4,773
1998	2,068	2,303	4,371	457	4,828
1999	1,311	2,250	3,561	488	4,049
2000	758	2,433	3,191	413	3,605
2001	1,158	2,615	3,773	429	4,202
2002 Budget	1,282	1,921	3,202	507	3,710
2002 Actual	1,076	1,676	2,754	666	3,418
2003 Budget	2,484	3,675	6,159	590	6,749

Sources: MIGAS and BP Migas

APPENDIX 6: PRODUCTION

1000 B/D)

Country	1998	1999	2000	2001	2002	Share (%)
Saudi Arabia	9,370	8,694	9,297	8,992	8,680	11.8
Iran	3,803	3,550	3,766	3,680	3,336	4.7
Venezuela	3,510	3,248	3,321	3,210	2,942	4.3
UAE	2,556	2,290	2,492	2,429	2,270	3.0
Kuwait	2,176	2,000	2,105	2,069	1,871	2.6
Nigeria	2,163	2,028	2,104	2,199	2,013	2.8
Libya	1,480	1,425	1,475	1,425	1,376	1.8
Indonesia	1,520	1,408	1,456	1,389	1,278	1.8
Iraq	2,126	2,541	2,583	2,371	2,030	2.8
Algeria	1,461	1,515	1,579	1,562	1,659	2.0
Qatar	747	724	796	779	755	1.0
OPEC	30,912	29,423	30,974	30,105	28,210	38.2
USA	8,010	7,731	7,733	7,670	7,698	9.9
Russia	6,169	6,178	6,536	7,056	7,698	10.7
Mexico	3,499	3,343	3,450	3,560	3,585	5.0
China	3,212	3,213	3,252	3,306	3,387	4.8
Norway	3,139	3,139	3,346	3,418	3,330	4.4
Canada	2,672	2,604	2,721	2,712	2,880	3.8
UK	2,793	2,893	2,657	2,476	2,643	3.3
Brazil	1,003	1,133	1,268	1,337	1,500	2.1
Others	42,445	42,475	43,600	44,245	45,725	61.8
TOTAL	73,357	71,898	74,574	74,350	73,935	100.0

Source: BP Statistical Review, June 2001

Appendix 6.2: Indonesian Crude Production by Company 1000 B/D)

Company	1974	1980	1999	2000	2001	2002	Change (%)
Caltex	909.2	760.5	746.0	705.9	643.2	577.3	-10.2
CNOOC	54.2	82.2	140.1	126.6	125.7	114.9	-8.6
Exspan	47.4	38.9	37.5	67.2	77.0	85.5	11.0
Total	2.3	198.8	81.2	85.5	90.0	79.8	-11.3
ConocoPhilips	19.3	25.5	109.5	87.9	83.2	69.3	-16.7
Unocal	101.4	108.8	63.9	59.4	59.3	56.2	-5.2
BP	89.5	133.8	71.5	62.6	50.8	46.5	-8.5
Petrochina	30.4	60.3	41.6	37.6	45.8	42.4	-7.4
Pertamina *	110	81.7	44.2	46.3	45.1	40.1	-11.1
Vico	2.5	23.3	54.7	48.4	40.8	36.2	-11.3
Kondur Pet.	-	-	16.9	14.9	13.8	11.1	-19.6
Talisman	-	-	20.0	14.6	13.8	12.7	-8.0
ExxonMobil	-	61.3	42.3	28.2	13.4	25.3	88.8
Husky/Sea Union	-	-	6.8	6.2	6.0	5.6	-6.7
Kodeco	-	-	1.8	4.2	6.5	13.5	107.7
Perkasa Equatorial	-	-	2.7	3.1	5.3	5.5	3.8
Premier Oil/Amoseas	-	-	6.4	4.4	4.5	3.8	-15.6

Haliburton/Citra PNP	-	-	1.5	2.0	2.8	2.2	-21.4
Surya Raya Teladan	-	-	1.7	1.5	1.4	1.4	0
Lirik Petroleum	-	-	0.4	1.5	1.6	1.8	12.5
PilonaTanjung Lontar	-	-	-	1.5	1.2	1.0	-16.7
Binawahana Petrindo	-	-	0.9	1.1	1.5	1.8	20.0
Indo Pacific Resources	-	-	-	-	0.8	0.3	-62.5
Intermega	-	-	0.6	0.7	0.7	0.6	-14.3
Kalrez Pet./Santos	1.4	0.9	0.7	0.6	0.5	0.5	0
Japex	-	-	0.6	0.6	0.4	0.3	-25.0
Golden Spike/Kodel	-	-	0.5	0.6	0.4	0.4	0
Retco/Western Nusantara	-	-	-	0.3	0.4	0.5	25.0
Amerada Hess/Energy Eq.	-	-	0.2	0.2	0.1	0.1	0
Patrindo Persada Maju	-	-	-	0.2	3.9	2.5	-35.5
Babat Kukui Energy	-	-	-	-	0.1	-	-
Petronusa Bumibakti	-	-	-	-	0.1	-	-
GFB Resources	-	-	0.3	-	-	-	-
Bumi Siak Pusako	-	-	-	-	-	11.2	-
Matriks	-	-	-	-	-	1.1	-
Radian Ramok	-	-	-	-	-	0.1	-
TOTAL	1,374.9	1,576.0	1,500.3	1,414.1	1,344.0	1,251.5	-6.9

Source: Oil Industry/Migas

* Pertamina-owned fields

Appendix 6.3: Crude and Condensate Production by Area (B/D)

Company/Block/Area	Jan-Dec 2001			Jan-Dec 2002		
	Crude	Conden	Total	Crude	Conden	Total
Caltex						
Rokan, Riau - PSC	579,821	11,990	591,811	537,190	11,364	548,554
Siak, Riau - PSC	2,582	-	2,582	2,433	-	2,433
MFK, Riau - PSC	550	-	550	3,233	-	3,233
CPP	48,259	-	48,259	23,461	-	23,461
CPP, Riau - PSC, Ex Caltex (now operated by BSP)	-	-	-	11,163	-	11,163
CNOOC (ex YPF/Maxus)						
South East Sumatra, Off. -PSC	125,705	-	125,705	114,899	-	114,899
Total Fina/Elf						
Mahakam, E. Kalimantan Off. - PSC	20,953	69,042	89,995	17,473	62,371	79,844
Exspan						
Tarakan, E.Kalimantan TAC	6,039	-	6,039	6,188	-	6,188
Kampar - PSC	5,863	71	5,934	6,136	58	6,194
Rimau - PSC	69,401	11	69,412	72,225	-	72,225
Tarakan - PSC	1,078	-	1,078	895	-	895
UNOCAL						
W. Pasir, E.Kalimantan, Off. PSC	54,191	5,122	59,313	51,223	5,010	56,233
BP						
Kangean, East Java - PSC	-	3,198	3,198	-	2,465	2,465
North West Java Sea - PSC	42,675	4,923	47,598	39,520	4,514	44,034
ConocoPhillips						
Natuna Sea, Off. - PSC	47,922	-	47,922	38,111	-	38,411
Jambi - EOR	5,229	-	5,229	4,492	-	4,492
Ramba - TAC	13,449	-	13,449	10,879	-	10,879

Aceh - PSC	1	-	1	-	-	-
Grissik - PSC	4,283	1,731	6,014	4,137	1,721	5,858
Kakap - PSC Off.	10,105	607	10,712	8,963	681	9,644
CNPC						
Tuban - JOB	11,649	-	11,649	10,676	-	10,676
Salawati - JOB	5,034	-	5,034	4,615	-	4,615
Irian Jaya - PSC	6,262	601	6,863	5,625	521	6,146
Jabung, Jambi - PSC	22,259	-	22,259	20,969	-	20,969
Pertamina						
Rantau	3,651	511	4,162	3,702	109	3,811
Prabumulih	15,283	-	15,283	13,423	-	13,423
Jambi	3,016	-	3,016	2,890	-	2,895
Cirebon	13,186	-	13,186	12,485	-	12,485
Cepu	2,738	-	2,738	2,540	-	2,540
Kalimantan	4,193	-	4,193	3,795	-	3,795
Sorong	1,025	-	1,025	1,190	-	1,190
VICO						
Sanga sanga E.Kalimantan - PSC	20,324	20,453	40,777	19,772	16,451	36,223
Kondur Petroleum						
Malaka Strait, Riau, Off. - PSC	13,787	-	13,787	11,090	-	11,090
Talisman						
Oki - JOB	6,907	-	6,907	5,546	104	5,650
Tanjung - JOB	6,896	-	6,896	7,021	-	7,024
ExxonMobil						
Aceh - PSC	-	13,408	13,408	-	25,273	25,273
Kodeco						
Poleng, Off. Java Sea - TAC	5,983	-	5,983	5,809	-	5,809
West Madura, Off - JOA	346	123	469	7,577	123	7,700
Sea Union Energy						
Limau - JOB	5,997	-	5,997	5,623	-	5,623
Perkasa Equatorial						
Sembakung - TAC	5,303	-	5,303	5,520		5,520
Premier Oil						
Anoa, Natuna Sea, Off. - PSC	4,540	-	4,540	2,805	962	3,768
Patrindo Persada Maju						
Wasian, I. Jaya - TAC	3,908	-	3,908	2,487	-	2,487
HED Indo. /Citra P.						
Abad/Raja - EOR	2,811	-	2,811	2,177	-	2,177
Lirik Petroleum						
Lirik- EOR	1,550	-	1,550	1,797	-	1,797
Binawahana Petrindo						
Meruap - Jambi - TAC	1,512	-	1,512	1,754	-	1,754
Surya Raya Teladan						
Benakat - EOR	1,378	-	1,378	1,378	-	1,378
Pilona Petro						
Tanjung - S. Sumatra - TAC	1,222	-	1,222	1,023	-	1,023
Indo Pacific Resources						
Bawean, East Java Off. PSC	766	-	766	319	-	319
Intermega						
I. Jaya - TAC	445	-	445	189	-	189
Sele/Linda - TAC	213	-	213			
Salawati - TAC	20	-	20	20	-	20

Kalrez Petroleum						
Bula Seram, Maluku - PSC	531	-	531	515	-	515
Golden Spike						
Pendopo - JOB	369	77	446	325	60	385
Retko Prima/Western N.						
S. Sumatra - TAC	441	-	441	522	-	522
Japex						
Gebang - JOB	351	-	351	299	-	299
Amerada Hess						
Lematang, S. Sumatra - PSC	134	-	134	95	-	95
Babat Kukui Energy						
Babat Kukui, Jambi - TAC	55	-	55	19	-	19
Petronusa Bumibakti						
Selat Panjang, Riau - PSC	54	-	54	42	-	42
Radiant						
Ramok, S. Sumatra - TAC	28	-	28	96	-	96
Matriks						
N. Sumatra-TAC				1.1	-	1.1
TOTAL	1,212,273	131,868	1,344,141	1,119.9	131.8	1,251.9

Source: MIGAS

Appendix 6.4: Crude and Condensate Production (1,000 B/D)

Year/Month	Crude	Condensate	Total
1995	1,434.2	170.8	1,605.0
1996	1,421.7	172.9	1,594.6
1997	1,417.9	162.8	1,580.7
1998	1,401.3	155.3	1,556.6
1999	1,351.3	149.1	1,500.3
2000	1,271.7	142.4	1,414.1
2001	1,212.3	131.9	1,344.1
2002	1,119.9	131.8	1,251.9
2003			
- January	1,047.0	133.8	1,180.8
- February	1,046.8	133.5	1,180.3
- March	1,029.9	120.7	1,150.6
- April	1,008.7	134.8	1,143.4

Source: MIGAS

APPENDIX 6.5: Indonesian Crude Specification

Type of Crude - producer	API at 60° F	Pour Point	Water & Sediment	Sulfur Content	Wax Content	Loading ports
Minas-Caltex	34.1	95	0.3	0.09	34.2	Dumai
Duri-Caltex	20.3	60	0.4	0.19	13	Dumai
Widuri-Maxus	33.3	113	0.05	0.07	39.3	Widuri marine terminal
Condensate-Mobil	54.3	-20	0	0.002	-	Blang Lancang
Cinta-YPF/Maxus	32.8	100.0	Trace	0.12	19.56	Cinta marine terminal
Attaka-Union	42.3	-10	0.12	0.09	4.22	Santan marine terminal
Arjuna-Arco	36.7	70	0.45	0.09	-	Arjuna marine terminal

Badak -Huffco	41.3	-15	Trace	0.08	7.35	Santan marine terminal
Lalang -ondur Pet	39.2	90	0.05	0.11	27.42	Lalang marine terminal
Sepinggan-Union	31.7	20.0	0.01	0.11	-	Lawi-lawi marine terminal
Handil-Total	32.2	85	0.1	0.1	22.0	Senipah marine terminal
Walio-Trend	34.05	-20	0.05	0.72	-	Kasim marine terminal
Bakapai-Total	41.2	5	-	0.08	1.66	Senipah marine terminal
Bunyu-Pertamina	31.7	60	0.1	0.09	8.3	Bunyu
Kakap-Marathon	44.9	60	0.25	0.06		Natuna marine terminal
Jatibarang/Pertamina	29.0	110	0.5	0.07	24.6	Balongan
Arimbi-Arco	33.0	95	0.5	0.14	25.6	Balongan
Ikan Pari-Conoco	48	65		0.08	15.37	
NSC/Katapa-Asamera	50.8	-30		0.06		Pangkalan Susu
Udang-Conoco	39.1	95		0.05		Udang marine terminal

Source: Pertamina